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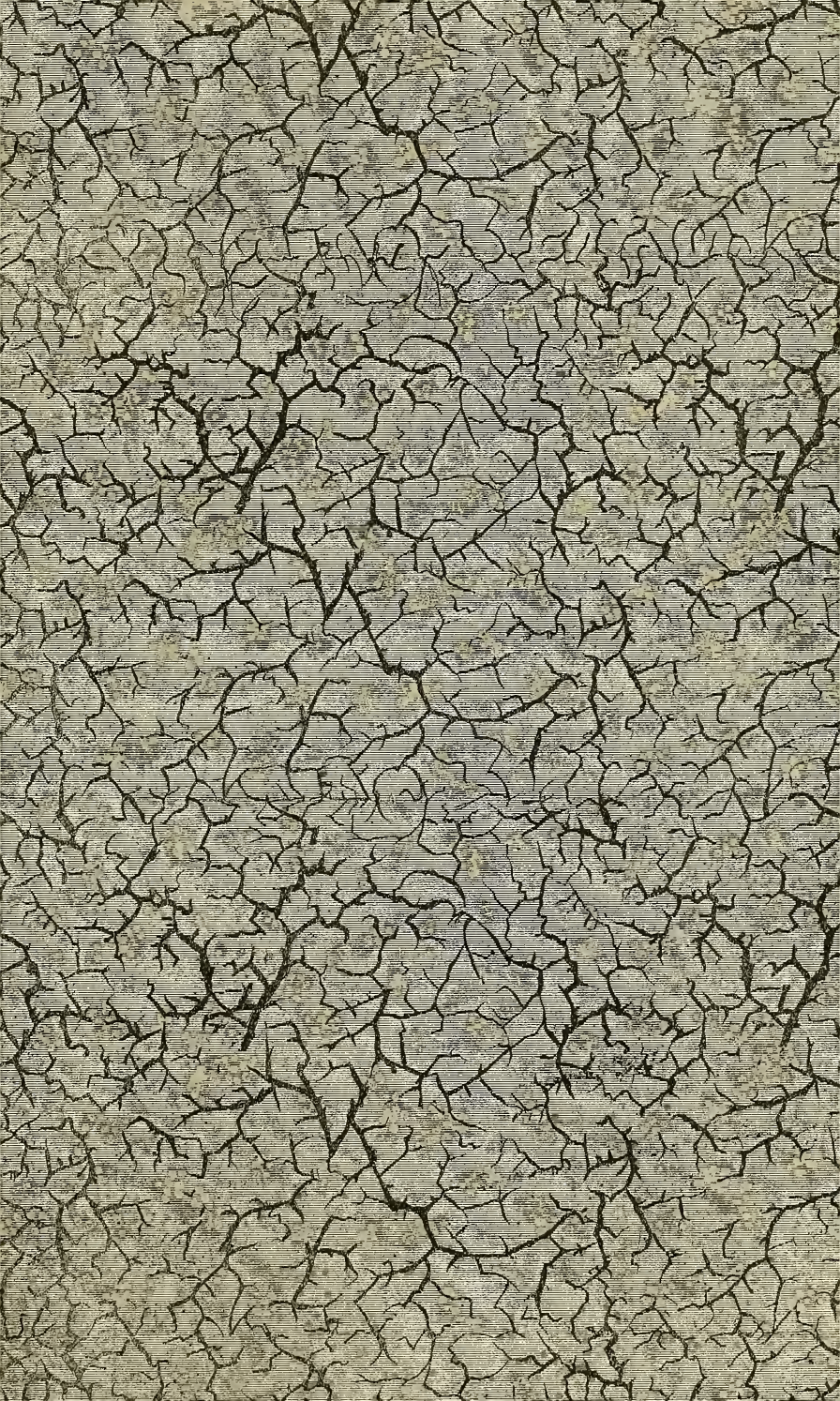

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CANCER

A STUDY OF THREE HUNDRED AND NINETY-SEVEN CASES OF CANCER OF THE FEMALE BREAST

WITH CLINICAL OBSERVATIONS

BY

WILLARD PARKER, M. D.

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PREFATORY NOTE.

During the few years preceding his death, my father, relieved in large part from the arduous labors of active professional life, occupied himself in gathering together and classifying the cases of mammary cancer that had come under his observation, amounting in all to nearly four hundred.

Before the work, however, had been completed to his satisfaction, his health and strength broke down, and he was able to do but little in its revision.

As it was his wish that the record should be published, I give it to the public nearly in the form in which he left it, and would ask that it be regarded, not as an elaborate work, but as embodying some of the observations made and conclusions reached during a long and busy professional life, by one who combined with an exceptionally large experience, strong, practical common-sense.

WILLARD PARKER, Jr.

New York, May 20, 1885.

INTRODUCTION.

THE subject of cancer is one of the most interesting in medical science, and one which has received especial consideration by some of the ablest thinkers and writers in the profession. But notwithstanding all the study which has been given to both as regards its histology and its clinical characteristics, its etiology is still unsettled.

More than half a century ago, when I commenced the practice of surgery, the question was altogether in a crude state, and whatever positive opinions were held by the profession, they could not be regarded as having the most rational foundations. One reason for the unsettled state of opinion was the lack of subsequent histories of cases which had been operated on, and which were often wrongly reported as cures as soon as the patient had recovered from the operation. Another cause of erroneous opinion was the lack of that histological knowledge which now shows that in most cases of cancer there is, at an early period, a degree of infiltration of the cancerous elements beyond what was formerly suspected. Errors also arose from the probable inclusion of cases of adenoid or other tumors, which had no malignant element in them.

It was with a view of collecting information which

might at some time, combined with the observations of others, throw more light upon the treatment — and perhaps also on the nature and the causes — of cancer, that I began to record various points in the cases which came under my observation. Had it been possible to anticipate the questions that have since arisen in regard to the conditions under which cancer is developed, I should, no doubt, be able to look back with greater satisfaction upon my work.

I now offer my contribution, remarking, however, that whatever value it may have depends more upon the observations of active practice than upon any elaborate research in the pathological laboratory. If it shall aid others in arriving at conclusions as to the treatment of cancerous patients, and as to the best mode of living to avoid possible or probable causes of the disease, I shall feel that my labor has not been in vain.

Of the records which I have kept, those which describe the disease as occurring in the female breast have been rather the more complete; and in treating of the subject I confine myself to these cases, though the remarks I may have occasion to make will apply to cancer in general.

It would be idle to discuss the symptomology of cancer, for that subject has been treated exhaustively by others. Let it suffice to say that we are here dealing — all doubts regarding diagnosis being laid aside — with cancerous tumors of the female breast, which may or may not implicate the tissues above and beneath it, which cause peculiar lancinating pains, which generally ulcerate at a later period, often involve other tissues and organs, and finally carry the patient off.

Every organ or part of the system derives from the blood, and assimilates, the elements which are necessary to its own existence and growth; that is to say, bony tissue assimilates the material for bone, muscle assimilates

the material of muscle, and connective tissue the material of connective tissue; and all these processes of assimilation are performed by virtue of the power which resides in the cells which form the distinguishing and principal portion of each tissue, to reproduce themselves by multiplication, under the normal influence of the nervous system. Under ordinary circumstances these assimilations go on without deviation from their normal types. But in consequence of certain influences which have a tendency to pervert the relations between proliferating cells and the terminal nerves, it seems that those cells may assume an abnormal condition; in other words, that they pass into cancer-cell proliferation. The connective tissue, instead of forming connective tissue from the indifferent cells and reproducing itself according to a normal type, undergoes a retrograde development, and is itself converted into indifferent cells, or into the group of so-called cancer-cells, found beyond the limit of true epithelial transformation.

We may therefore regard the formation of cancer-cells as a process of mal-assimilation. The fact that cancer has always, for a greater or less length of time, a merely local manifestation, only shows that the tissues of the part are the essential factors of the diseased growth. Moreover, we never have a primary formation of cancer except in an organ whose function has been impaired or perverted. After the formation of the primary tumor, however, the blood becomes contaminated with infecting elements, which, being conveyed to other parts, cause the cells of these parts to assume that peculiar phase of development which is called malignant. Transportation of tissues is undoubtedly effected in the lymph current as well.

The cancer cell probably has the power of producing its like by assimilating the nutritious elements of the

blood, as other tissues have, and it may be considered as having a life peculiarly its own. Not having, however, a normal function to perform, like other cellular tissues, it is not, like them, subject to wasting metamorphosis, and therefore it tends to keep adding to its bulk. Thus it has a double mode of growth in its type: (1) by reproducing itself, and (2) by causing, through infection, a growth similar to itself in adjacent healthy cellular elements.

Malignant growths invade the surrounding tissues, and in general are to be distinguished by this peculiarity from tumors which displace the adjoining structures.

This view of the subject inclines me to think that there is truth in several of the different theories which have been advanced as to the genesis of cancer. The doctrine of Virchow, that the connective tissue corpuscles are the starting-points of the new pathological formations, is, I believe, true just so far as connective-tissue cells may develop cancer cells. The theory of Thiersch and Waldyer that cancer cells are a development of the lower layer of the epidermis or of the epithelium of glandular structures, and that this growth invades the connective tissue; or the further extension of the theory by Waldyer that cancer may proceed from any epithelial structure, I believe to be perfectly true as far as these structures have the power, under certain abnormal circumstances, of taking on cancerous development. But the theory is quite insufficient when it seeks to limit the cancerous proliferation to the epithelium or to the connective tissue. Köster, of Boule, considers that the so-called "cancer cylinders" are sometimes produced by a multiplication of endothelial cells within the lymphatic vessels; while Classon thinks that the wandering white blood corpuscles, by passing through the walls of the blood-vessels into the lymphatics, are the elements from which cancer cells spring. Dr.

E. W. Hoeber, of New York, has made some observations "on the first development of the cancer elements," in which he claims to have demonstrated that their growth springs from the basis subtance of connective tissue.

I

ANALYSIS OF THREE HUNDRED AND NINETY-SEVEN CASES OF CANCER OF THE FEMALE BREAST OCCURRING IN THE PRACTICE OF THE WRITER.

In order to present the subject concisely I have arranged my cases in tables which will be found at the end of the volume; while, as the discussion progresses, I shall relate the histories of a few of the typical cases more in detail. The records begin in 1830 and are continued down to 1883. After discarding a number which do not present sufficient data to be of value, the whole number recorded is 397.

For the sake of convenience, principally in examining conditions relating to etiology, they are divided into nine different groups; not according to any classification founded upon minute anatomical structure, but with regard to certain relations to physical constitution, duration, course of the disease, etc.

The nine groups, as I have classified them, are as follows:

Group I. Cases characterized by a tumor, small and generally painless for a number of years, which frequently came in the *nidus* of abscess, of inflammation, of injury by a blow, or of pressure applied for a considerable length of time. The malignant period, however, of several of these tumors was quite short; and some few of them, conse-

quently, have found a place in the acute group (III.) as well as here.

GROUP II. Tumors which assumed a malignant character very soon or immediately after their discovery, in case of injury seeming to follow it directly, and which, moreover, had a tolerably long course, some of them lasting many years. These may be called chronic cases.

GROUP III. Acute cases, or cases which ran an exceedingly rapid course, sometimes ending in death in seven or eight months after the discovery of the disease.

GROUP IV. Cases of cystic cancer (cysto-scirrhus).

GROUP V. Cases of ordinary scirrhus of the breast, which have not been included in Group I., nor in Group II., and form the greatest number of the cases.

GROUP VI. Young women under thirty-five years of age at the time of the discovery of the tumor.

GROUP VII. Old women, of seventy years and over at the time of the commencement of the disease.

GROUP VIII. Cases which present a history of cancer among ancestors, or other blood relatives.

GROUP IX. Cases which present a history of phthisis among ancestors or other blood relatives.

An analysis of the cases recorded in the tables shows that of the total number there were, —

Married	253
Widows	89
Single	55
	397

Of the married and widows, 342 in all, —

58 never had a child,
37 had but one child,
240 had two or more children, and of
7 there is no record.

Of the total number of cases,—

The left breast alone was involved in	189
The right breast alone was involved in	174
Both breasts were involved in	14
Which breast was involved was not recorded in	20
	397

In the fourteen cases in which both breasts were involved, the left was attacked first in seven cases, and the right in seven.

There is usually some difficulty in ascertaining the age at which the cancerous development commences, as the patient seldom consults the surgeon until the disease has made some progress. Besides, in many cases, malignant trouble is not suspected until years after the occurrence of an abscess or contusion to which no importance had been attached. I have accordingly rejected 38 cases in which it was not possible to include the ages between the quinquennial periods given below. In the 359 remaining cases, the disease commenced as follows:—

Between	25	and	30	years	in	5	cases.
"	30	"	35	"	"	23	"
"	35	"	40	"	"	54	"
"	40	"	45	"	"	78	"
"	45	"	50	"	"	80	"
"	50	"	55	"	"	57	"
"	55	"	60	"	"	31	"
"	60	"	65	"	"	12	"
"	65	"	70	"	"	14	"
"	70	"	80	"	"	5	"
						359	

The cases of aged women are placed in a separate group and will be noticed more particularly further on; but it may be remarked here, that there were eight cases in women over seventy years of age, one of these having

attained her eightieth year at the time of observation. The cancerous development thus began in but four cases after the patients had reached their seventieth year. It will of course be borne in mind that the number of individuals in the community is greatly less at the more advanced than at early ages, and that consequently the figures just given do not express the probability or "expectation" of the occurrence of cancerous disease at either of the ages that I have discriminated.

Of the total of 397 cases the duration has been estimated in 178. There are 196 cases which either have no complete record, or are recent cases still under observation in 1883: and 23 cases (Nos. 4, 5, 8, 9, 22, 26, 28, 32, 55, 92, 106, 144, 154, 161, 162, 201, 223, 260, 261, 263, 271, 277, and 321), which were either then living and of long duration, or if not living, of too long duration to be properly included in an estimate, either on the ground that the malignant nature of the tumor may have entirely disappeared, or that they are exceptional cases. These 219 cases are therefore to be deducted from the total of 397.

I say that the duration of the 178 cases has been estimated, because in a majority of all cases of cancer, no matter how perfect the history may be from commencement to termination, the duration is, and must be, estimated rather than known. In some cases it can be stated with tolerable exactness, but in the greater number there is a period of doubtful duration, beginning after an abscess or injury, or dating back to a more or less indefinite time,—the patient being unable to date the commencement of the cancerous tumor and of the attendant symptoms. The question, therefore, of the average duration of cancer, taking all the forms or varieties together, or taking them separately, must in a measure be unsettled: but this matter is of sec-

ondary importance to the questions of etiology, diagnosis, prognosis, or treatment. The average duration of the 178 cases is 3.38 years.

Separating these 178 cases into two divisions, in 100 cases the tumor was removed with the knife; in 78 cases it was not so removed, or was operated on only with caustic plasters. I find that the average duration of the 100 cases in which the tumors were removed with the knife was 3.54 years, while in the 78 cases not removed with the knife the average duration was 3.22 years. The second division includes one case of twenty-two years' standing, in which there was an interval of health, and in which death took place from cancer of the uterus; while only one case approaching such a length of time is included in the first division, viz.: No. 15.

By looking at the tables it will be seen that there are sixteen cases of long duration which were operated on with the knife, and which were either living in 1883 or were well when last heard from. Several cases are also living in which the tumors have been removed within the last seven years. These statistics point to the propriety of amputation in most cases in which the axillary glands or the lymphatic system are not affected.

Of the 178 cases in which an estimate of the duration of the disease has been made, there died within one year from the commencement of the malignant development, twenty-three; between one and two years, forty-nine; between two and three years, thirty-eight; between three and five years, forty-two; between five and ten years, twenty-one, and over ten years, five. This experience indicates that the greatest number of deaths from cancer occur after the first year, and before the end of the second year of the cancerous development.

Of 353 cases in which the relative period of cessation

of the menses has been recorded, the cancerous development appeared, —

Before the cessation in	189 cases
At " " "	84 "
After " " "	80 "
	353

Ninety-three cases were in women under forty years of age, and one hundred and sixty-five were under forty-five years.

In ninety-four cases the tumor was located in the seat of a blow or other traumatic injury; twenty-eight in abscess, and four in inflammation. Seventy-eight had been the subjects of much mental care, affliction, or sorrow. Taken altogether, as far as recorded, there were two hundred and twenty-nine cases in which either a blow followed by a tumor, mammary abscess, injury or disease of the nipple, followed by a tumor, or by inflammation not perfectly resolved, or faulty nursing or weaning of child, producing trouble in the mammary gland, has been recorded. The cases of injury to the mammary gland, and of irregularities of its function, are so numerous that it may probably be held safely as a rule that mammary, as well as other varieties of cancer, has a traumatic exciting cause.

The injuries to the breast by the wearing of stays and tight dresses cannot be estimated with any degree of accuracy, but it is safe to say that in the greater number of the cases not included in blows and inflammations, more or less injury is caused by habitual pressure produced in this manner.

I come now to the consideration of the nine special groups under which were classified the cases indicated.

Group I. Cases, sixty in number, in which is noted a small and generally painless tumor, lasting through a number of years.

Of these cases, only three were of very full habit, or decidedly fat. Many of them were fleshy, but less so than the cases which had a very early malignant development. The number of cases in which injury or abscess was known to have occurred before and during the seat of the cancerous development is twenty. Many of them had been the subjects of mental affliction, and, beside these, thirteen had also been the subjects of great anxiety and care.

Only about one third of these cases were among women accustomed to rather luxurious living, two thirds being among the middling and poorer classes. The number having consumptive relatives is worthy of attention, and is one of the characteristics, I an inclined to think, of cases of this kind (cases commencing in tumors which have a considerable benign period).

The connection between cancer and phthisis has occupied considerable attention, and is one of the difficult problems associated with the subject. What is the relation between the two, if there be any at all? Walshe maintains that they have a repulsion for one another. According to his observations, tubercle and cancer rarely co-exist. "In one hundred and four narratives of the post-mortem examinations of adult persons cut off by cancer (narratives either my own or from intrinsic evidence trustworthy) I found but seven in which the anatomical character of phthisis was present. The difference of the ages at which the two diseases are most prevalent may to a certain extent, but unquestionably not altogether, explain this result." "The cases of encephaloid, seventy-two in number, furnished but two examples of tuberculous disease — a fresh

argument to add to the numerous other facts bearing testimony in the same direction, against the opinion of those who either consider encephaloid disease as allied to scrofulous, or who with Mr. Travers actually regard it as cancer modified by strumous constitution." ("On the Nature and Treatment of Cancer." London, 1846, p. 185.)

These remarks of Dr. Walshe are entitled to great consideration, and the latter quotation in regard to encephaloid cancer is corroborated, so far as it goes, by my own cases. Some relation between tubercles and cancer does, however, seem to exist in certain cases of scirrhus of a chronic character. To these I will call attention further on.

The following noteworthy remarks of Bennett were made many years ago, but are fully in accord with our present knowledge. "Taking, then, the products of simple inflammation (say pus) as a standard, we cannot fail to remark that whilst the cell development of tubercle is below, that of cancer is above, the standard. One is deficient in the power of development, the other possesses this power in excess. It seems to me to be probable that tubercle is connected with some derangement of the function of the primary, and cancer with some derangement of the function of secondary digestion." ("On Cancerous and Cancroid Growths," by John Hughes Bennett, M.D., F.R.C.S., Edin., 1849, p. 205.) This, I believe, is the general rule in regard to the relation between cancer and tubercle, but, as I remarked above, there are exceptions; and the exceptions in my cases are, for the most part, among those which had a benign period of considerable duration, and progressed slowly. The following cases will serve as illustrations of this and other points.

Case 2. — A single woman had carried a lump in her breast for several years. She always had painful and dis-

ordered menstruation. At the age of thirty-four she went to a "cancer doctor," who applied caustic and removed a portion of the breast. About a year after this the breast became the seat of a more rapid development, which was entirely removed with the knife at the age of thirty-seven. The lymphatic system had not, apparently, become affected. The wound healed kindly, and the patient was living ten years afterwards. There was consumption among her relatives, and, although a well-developed woman, she presented in her own person a rather strumous diathesis.

Case 15. — A married lady, thirty-eight years of age, presented a tumor of the left breast, from which she had not nursed her only child, now eleven years old. The tumor had begun to give trouble a year before, at thirty-seven years, so that it probably had a benign period of about eleven years. During the last year and a half she had experienced a great deal of mental affliction. She was a person of considerable bodily vigor, and very fleshy. The lymphatic system was not perceptibly affected. The whole gland was removed, and she lived eighteen years after the operation, making, in all, nineteen years' duration. She died of secondary cancer in the lungs, liver, and other internal organs. She had relatives who had died of consumption, but there was no trace of cancer taint in the family.

Case 19. — A married lady, forty-five years of age, the mother of five children. The left breast presented a hard scirrhous tumor. The axillary lymphatic glands were involved, and there were cancerous tubercles in the skin. She had phthisical relatives, but none with cancer. She had severe, characteristic, lancinating pain in the tumor, which had assumed a malignant character during the last year, and now infiltrated the surrounding tissues. The tumor had a long benign period, there having been a lump

in the breast, the seat of the present cancer, since she was fifteen years of age. It remained in a quiescent condition till a year previously. The breast was removed Dec. 30, 1850. Another tumor was removed in 1853, and another operation was performed in May, 1854, after which she lived about one year.

These are rather typical cases of cancer of the breast in women having a consumptive taint, and they tend to corroborate the opinions of the writers just quoted. The want of vitality in a person of strumous tendency seems to arrest the rapid cell-development so characteristic of cancer. The following case presents an additional characteristic of cancer of the breast in women of consumptive taint, that of a tendency to sloughing.

Case 22.— A widow, forty-seven years of age, who had never had a living child, but had had a still-born child ten years before (at the age of thirty-seven). Soon after, a tumor made its appearance, during the involution of the mammary gland. It continued as an apparently benign tumor till about one year before amputating. It then began to grow rapidly, with inflammation in the region of the nipple, which was destroyed by sloughing. In November, 1851, the breast was removed at the College clinic, and the wound healed and remained in an apparently fair condition till the following Christmas, when it broke out and discharged as before, and had an intolerable stench. In March, 1852, a hard lump, resembling the core of a boil, was removed, and in the September following she returned to the clinic with the wound perfectly healed and in good condition. She had a consumptive taint, but had no relatives in whom cancer could be traced. She died several years afterwards, of cancer, at Bellevue Hospital; the duration of the cancerous growth thus being, according to estimate, about ten years. Here we have a

typical case of sloughing cancer, where it would seem that the infiltration of the malignant growth was circumscribed by inflammation and rapid suppuration, with partial sloughing. This tendency, according to my observation, is more marked in persons who have strumous constitutions.

The following may be taken as a typical case of chronic cancer, having a long benign period in a person free from consumptive taint.

Case 32. — Nov. 21, 1855. Nine years before this time, a single lady, thirty-eight years of age, discovered a small lump in the left breast. It developed rapidly during the six months previous to date. The tumor was removed, and was found to be cancer of the scirrhous variety. The wound healed kindly, and the patient was in good health, without any return of the disease, eighteen years after the operation, and twenty-seven years after the first appearance of the tumor. This lady, although well developed, was not as fleshy as the majority of subjects of cancer of the breast.

Summing up these data: There are included in this group sixty cases, and of these seven can count ancestors who have had cancer; eleven have had ancestors who were consumptive; and three trace both cancer and phthisis in their families.

About one half were fleshy or of full habit.

Fourteen had received a blow or other injury.

Two had been burnt by caustic.

Twelve had been subjects of mammary abscess.

Three had had mastitis, which did not suppurate.

Four had dysmenorrhœa.

Six had irritation and other uterine irregularities, and one a still-born child.

Fourteen had been the subjects of great mental affliction.

The average duration of the tumor in a benign condition, in forty-two cases which permitted a fair estimate to be made, was 10.9 years; the average age at which the apparently benign tumor commenced was 34 years; at which cancerous development commenced, 46 years.

The cancer became acute in seven of the cases; and the number of cases in which there was no injury or derangement of the reproductive system, or any assignable cause, was eleven.

The average duration of cancerous growth in twenty-nine cases, in which it could be estimated with any exactness, was 6.3 years.

The average duration of life after amputation in eighteen cases was 5.2 years.

Group II. — Tumors which assumed a malignant character very soon or immediately after their discovery, in case of injury, seeming to follow it immediately; and which, moreover, had a tolerably long course.

In this group there are thirty-eight cases. The chief difference between my first and second groups consists in the duration of the benign state of the tumor.

Among the thirty-eight cases in Group II., five counted progenitors who were the subjects of cancer, and five had relatives with a phthisical history. About one half were fat or fleshy. Eleven had received blows or injuries in the seat of the cancer previous to its development. Three had had caustic applied, which may or may not have preceded the malignant growth. Three had had mammary abscess, and four had had difficulty in nursing. Five of them had been the subjects of great mental affliction; while in the remaining cases no cause could be assigned. These ratios agree pretty well with those in the first group, and indicate a similar mode of development.

The average age of the subject at the beginning was 45.9 years, and the average duration of the tumor twelve years. The average duration of life after amputation, in those cases where a fair estimate could be made, was 11.5 years.

In the thirty-eight cases comprising this group there were only five — or about one-seventh of the whole — who could point to relatives who were subjects of cancer. There were only five who had consumptive relatives.

Regarding the cases in this group as not essentially different in their origin and mode of development from those in the first group, we may yet assume that their earlier cancerous development was due to the lesser influence of tubercular diathesis. Attention is called to the small number who had " cancer relatives," the ratio being only about one ninth, which is below the ratio which we should expect to find if we were to estimate the number of persons in the community in general who could trace cancer among their relatives.

A much greater proportion of these cases than of those in Class I. were among persons in good circumstances. Many of them lived in luxury, and took but little exercise in the open air, living in overheated, and, as is not uncommon, in poorly ventilated rooms. In brief, for six sevenths of the number comprising this group, there were causes enough that tended to produce cancer, without taking into consideration the influence of heredity, had such influence been traceable.

Case 3. — June 3d, 1832. A married lady, 42 years of age, the mother of several children. She had a tumor of the left ring-finger two years previous to this date. At the latter time she presented a scirrhous tumor of the left breast, which had all the characteristic symptoms of that disease. It was amputated. The wound healed kindly;

she lived twelve years longer, and then died of secondary cancer of the liver, which weighed twelve pounds at the autopsy. This lady had no relatives who were the subjects of either cancer or consumption, as far as could be ascertained. She was robust and healthy until the disease was far advanced.

Case 4.—May 9th, 1835. A married lady, 38 years of age, and the mother of eight children. Tumor of right breast; no involvement of axillary lymphatic glands. A maternal aunt died of cancer of the uterus; another, of cancer of the eye; and a sister, of cancer of the breast. Two cousins also, on the maternal side, had died of cancer. The tumor was discovered eighteen months before the time when I first saw her. This breast had been the subject of suppurative inflammation during lactation, and had never performed its functions well. I removed the tumor, and she made a good recovery. She called on me in New York City twenty-seven years afterwards, and was feeling well, although a small cancerous tumor had appeared on the right side of the neck.

Group III. Cases which ran an exceedingly rapid course, sometimes ending in death in seven or eight months from the discovery of the disease; and which were as a rule of the soft, or encephaloid, variety of cancer.

These I have called acute cases. They include sixty-two cases, of which six had relatives who were the subjects of cancer (viz.: cases Nos. 113, 136, 159, 174, 302, 349). Thus about one tenth of these cases had "cancer-relatives," if I may be allowed to use this term, signifying a cancerous history among ancestors. There were ten, or one in 5.5, who could point to consumptive relatives, and in three cases there was a family history of both can-

cer and phthisis. Sixteen, or about one fourth, had received blows at the seat of the tumor, and in four the tumor developed in the situation of abscesses. One had been the subject of dysmenorrhœa, and one had had difficulty in nursing from the breast. Average age at commencement of disease, 43.5 years. Average duration of disease, 12.5 months. Average duration of life after operation, seven months.

Case 7. — April 8th, 1841. This lady, forty-six years of age, discovered a tumor in the right breast five months before consulting me on the above date. It was growing rapidly, the lymphatics in the axilla were enlarged, and there were all the symptoms of a rapid development of cancer. The breast was removed, but the progress of the disease was not arrested. The patient was soon attacked by severe pain in the spinal cord; the cancerous growth returned in the cicatrix, and she died in less than five months after the operation, with secondary cancer in various parts of the body. She was very fleshy, belonged to a healthy family with no record of cancer or consumption, and lived rather sumptuously. There is no record of a blow, abscess, or other exciting cause. That there was some source of irritation in the mamma, however, is scarcely a matter of doubt. Under the present conditions of society, there are very few perfectly natural cases of lactation, and as a rule, women who have children have more or less irritation of the mammary apparatus.

Case 191. — April 6th, 1868. A German lady, the mother of several children, forty-three years of age, very fleshy and robust. No cancer or consumptive taint. Some years ago she had an abscess in the right breast. About two months ago a tumor began to grow in the seat of the abscess, and is now developing rapidly as a medullary cancer. The axillary lymphatic glands are involved.

The entire breast, as well as the indurated lymphatic glands, were removed, but the disease returned in the cicatrix and contaminated the whole system, and the patient died in thirteen months from the discovery of the disease, and eleven months after the operation.

Case 34. — February 2d, 1856. A lady, forty-two years of age, the mother of eleven children, and belonging to a very healthy family, with no trace of cancer or consumption, discovered a tumor a short time before the birth of her youngest child, which is now six months old. It presented all the appearances of a rapidly developing medullary cancer. The axillary lymphatic glands were enlarged, yet an operation was decided upon. She died in four months afterwards, eleven months from the beginning of the disease. This patient was very fleshy, had good general health, a good appetite, and was generous in her habits of eating.

A noteworthy fact in regard to these cases of acute cancer is that, in a great proportion of them, the lymphatic system was very early involved; before, or, in other words, the operation was performed after, the lymphatic system had become implicated. Probably, indeed, the lymphatic system had become involved in all of them, but the fact was not manifest. Whenever a case can be pronounced one of acute cancer, it is probable that an operation, whether the axillary glands are involved or not, will be of no avail.

Another remarkable fact to be noticed in this group is the great proportion of married to single women. But let us not be misled by supposing that married life favors the development of acute cancer. The more logical inference is, that women of greater vitality have acute cancer oftener than others, and these women are not so likely to remain single as those having less vitality.

What significance is there in the fact that thirteen out of the fifty-five married women and widows never had children, in other words, were barren, or in a condition not to conceive? Is it to be inferred that child-bearing lessens the tendency to cancerous development? By no means. On the contrary, in any individual, or number of individuals, pregnancy and child-bearing increase the risk; this is borne out by statistics and by common observation. What then is the meaning of this seeming paradox? Simply, that a condition of the system not favorable to conception, that is, the existence of dysmenorrhœa, uterine displacement, epithelial irritation, uterine catarrh, presents the conditions which are favorable to the development of cancer of the breast, because these are productive of mammary irritation.

Now the question arises, does pregnancy, in the case of uterine disease, increase or diminish the risk of acquiring cancer? Observe that this is a different question from that whether pregnancy increases the risk in a female. The answer, however, will probably be similar, that is, that the risk is increased, and to a greater degree than in the case of a healthy woman, because the irregularities of function connected with child-bearing are greater than in a healthy woman. Yet pregnancy and child-bearing will not be frequent causative factors if the laws of nature are well observed, and if the patient receives such treatment and care during the lying-in period as lessen the chances of irregularities of function.

Group IV.—Cases of cystic cancer (*cysto-scirrhus*).

There were thirteen cases of this variety of cancer, and among them only one (No. 32) who could point to a relative laboring under the disease; and only one who had consumptive relatives. As a rule the patients in this

group enjoyed good general health. Seven are recorded as having received blows at the seat of the tumor; one had mammary abscess, one dysmenorrhœa, one had been operated on by caustic plasters, and one had had great mental affliction. Ten of the thirteen had a record of some exciting cause. The average age at the commencement of the disease was 52.5 years, and the average duration of those cases that had a full history was 5.6 years. Two of the subjects are still living. All had borne children except No. 368. Whether the experience of others will indicate that the cystic form of cancer commences to develop rather later than other forms I do not know.

Case 69. — March 16, 1861. A lady fifty-one years of age, the mother of several children, of strong constitution and full habit of body, had several years before received a blow upon the right breast, which at the time gave much pain, and not long afterward developed into a cystic tumor. The tumor and the whole gland were extirpated March 16, 1861, but the disease recurred in the cicatrix, and a second operation was performed in February, 1862. The axillary lymphatic glands were not involved at either operation. Nevertheless, the disease went on unchecked, and the patient died March 6, 1863, three years after its discovery, and two years after the first operation. This case was somewhat more rapid in development, and hastened to a termination rather sooner than the other cases of cysto-scirrhous tumors. The patient was, however, younger than most of the other subjects of this form of cancer, with the exception of Case 92, which was a cystic form occurring in a woman thirty-two years of age.

Case 74. — July 6, 1862. A lady sixty-nine years old, very fleshy, the mother of several children, and having

always enjoyed good general health, had received a blow upon the left breast three years previously, that is, at the age of sixty-six, which was followed by a tumor that at the age first named began to show signs of malignancy. It was another case of cysto-scirrhus; and the patient died after five years' malignant duration of the tumor, without an operation having been performed. Ten years after the death of this patient, a daughter became the subject of general cancer, in which the skin was extensively involved.

Case 94. — May 5, 1863. A lady seventy years of age, of full habit and of good general health, physically sound, with no cancerous or consumptive taint, and belonging to a long-lived family, received a blow upon the breast which caused much pain. A cyst soon developed, which in about five years showed evidences of a malignant nature. No operation, however, was performed, and she died twelve years after receiving the blow, or seven — perhaps eight — years after the commencement of the malignant growth. This I regard as a typical case of cysto-scirrhus in an old lady.

From my own observations I am led to think that scirrho-cystic tumors generally develop at a later period than other forms of cancer, and are proved to follow blows, without which their occurrence would be doubtful.

Group V.— Cases of ordinary scirrhus of the breast which have not been included in Group I. or in Group II.: including the cases having a benign period at their commencement.

The cases placed in this group form the greatest number; but they have comparatively little individual interest, from the fact that many of the most significant cases have been separated from them. They furnish — in com-

mon, however, with the mass of the cases contained in all the other groups — evidence of the frequent commencement of cancerous tumors in the seats of injuries, and of a decided tendency towards an abnormal development of epithelial structures in persons of full physique and of luxurious habits of living. There are 221 of these cases, among them 83 whose history is completed, and in which the duration of the malignant growth can be estimated. This is placed at 2 years and 10 months. Average age at commencement of growth, 47 years and 5 months. The average length of life after operation, in 50 cases, was 1 year and 4 months. The number having "cancer relatives" was 28; having consumptive relatives, 34; and 4 furnish histories of both cancer and phthisis. Of these cases, 44 of the subjects were fat; 43 were fleshy in habit, and 29 well developed and strong, making in all 116, or over one half of the whole, who were persons of more than average physical development. There were 30 who were thin or delicate; while in the remaining cases no record of physical condition of the general system was preserved. The record shows that 53 had received blows at the seat of the tumor, and 12 had been the subjects of mammary abscess at the seat of the tumor. In 20 of the cases there had been miscarriage, or dysmenorrhœa. Caustic had been used in 4 cases, and 47 had had great mental affliction. There were 136 cases in which a record showed that the patient had received either a blow or an injury of some kind, had had an abscess, or had suffered great mental affliction. In several instances two or more of these exciting causes were present in one subject, but each case represents only one person. There are, therefore, only 85 cases in which no record of exciting causes had been made, but we have every reason to believe that such causes did exist, unknown, in a majority —

perhaps in all — of these remaining cases. The axillary lymphatic glands were involved at the time of observation in 102, and not involved in 106 cases; and in 13 there is no record. Several of the cases, the subjects of which are now living, are placed in this group, as may be seen by referring to the table, but they are not counted in making up the average duration, and in time they might fall into other groups according to later history.

Case 51. — Dec. 28, 1858. A lady thirty-nine years of age, strong, of full habit and good general health, the mother of several children, the youngest seven years of age. While nursing the youngest child she received a blow upon the left breast, which caused much pain, and resulted in the formation of a tumor which in about a year and five months afterwards developed a malignant growth. It then began to give trouble and to cause severe lancinating pains. The axillary lymphatic glands were indurated at the time of observation, but an operation was decided upon, and the whole gland was removed. The wound healed kindly, and the disease made but little apparent progress for eight or nine months, when the lymphatic system became more rapidly involved, and the patient died in a little over two years after the operation. An autopsy revealed cancerous development in the liver, as the principal seat. This patient had no cancerous or consumptive relatives, as far as could be learned. She had been a hearty eater, and had dyspepsia.

Case 117. — June 18, 1864. An unmarried lady, forty-two years of age, well developed and strong, with good general health, and with no record of cancer or consumption among blood-connections, received a blow about eight months before date, which was followed by very severe pain. At the same time she was much distressed at occurrences which took place during the civil war.

The tumor began to develop in about four months after she received the blow, and in its site. The axillary lymphatic glands were enlarged at the time she consulted me, but it was decided to amputate. The entire breast was removed; the wound healed; but, after six months, the disease returned in the cicatrix and skin, and the patient died in the spring of 1865, about one year and four months after the discovery of the tumor.

Case 169. — April 14th, 1867. A lady, fifty-two years of age, who had lost her husband a month previously, had a painful tumor of the right breast, which had begun to give trouble three years previously. She consulted me for a diagnosis, which was that the tumor was a cancer. She sailed for Europe in May, 1867, and consulted M. Nélaton, who amputated the breast in September of that year. The wound healed, and she returned to the United States the latter part of the following October. When she arrived home the disease had begun to return, and she died of general cancer in May, 1868, about eight months after the operation. The tumor was encephaloid, although its duration was about four years. The axillary lymphatic glands were involved at the time of the operation — indeed, were affected when she consulted me, in April, 1867. Her health had always been good, except that the menstrual function was irregular and painful; and during this period the tumor swelled and gave her much pain. Her husband had been sick a long time, and her care and anxiety had been very great. She had never conceived, and I believe these were sufficient traceable causes for the malignant epithelial growth.

Case 183. — November 9th, 1867. A lady, forty-eight years of age, the mother of five children, had, seven years ago, an induration of the uterus, accompanied by an exceedingly fetid discharge, and the affection was pro-

nounced cancerous. The actual cautery was applied on six different occasions, and the disease receded. About ten months before the date given, a tumor appeared in the left breast. During the recession of the uterine disease, her health, which had been very good, became rather delicate, but she improved about the time of the appearance of the tumor in the breast. The axillary lymphatic glands were enlarged, and no operation was advised. The disease progressed in the usual manner, and the patient died in the fall of 1869 of general cancer. The duration of the malignant growth cannot be estimated in this case, as it is uncertain whether the uterine disease was cancerous, or whether the irritation it gave to the mammary gland was a cause of the cancer in that organ. No cancer or consumption was traceable among her relatives.

Group VI. Women under 35 *years of age.*

The epithelial tissues possess more vitality in young than in old persons, and it would be expected that cancerous proliferation would be more rapid in the young than in the old. This has been verified by general observation, and my cases point to the same conclusion. Sixteen — or about one third — of the patients belonging to this group were decidedly fat, and sixteen of the remainder were full or fleshy; all, or nearly all, of these were women of more than ordinary physical development. Sixteen were cases of acute cancer. Of the thirty-two married women and widows, six were barren, and several had only one or two children. For instance, Case No. 342 was that of a lady thirty-three years old, married several years, but having only two children, the youngest five years old. There is no record of menstrual irregularity or of uterine disease; yet notwithstanding the want of positive evidence it could scarcely have been otherwise, or she would have had

more children. She lived generously and had dyspepsia, but was otherwise in very good health. A grandfather was said to have had cancer of the lip.

Case No. 25. — July 17th, 1852. A lady twenty-eight years of age; large, fat, well-developed, and in good general health. She had, however, never been pregnant, but had suffered from dysmenorrhœa before marriage. The whole breast was infiltrated with the cancerous growth, and she had considerable lancinating pain.

Case No. 98. — May 19th, 1863. A young woman, thirty-five years of age; another example of cancer associated with barrenness. She had a tuberculous inheritance, and the disease lasted six years.

Case No. 103 is that of a lady, thirty-three years of age, with only two children, the youngest being six years old. It is another example showing the relations of irregular uterine functions to cancer. She had labored under chronic uterine disease, of what character the record does not sufficiently indicate; but whatever may have been its nature, it had an irritating influence upon the nervous system and epithelial structures. The tumor commenced as benign four years before date, and followed a blow on the right breast. See the case in the table. Case No. 174 is an example of acute cancer in a young woman, thirty-five years of age, and barren. She was of full habit of body, a finely-developed woman of the nervous temperament. She had had great domestic affliction just previous to the appearance of the tumor, and this, I believe, was a cause of the disease, in addition to the rather luxurious habits of the patient.

Case 250, August, 1872, offers another example of the development of carcinomatous disease in a lady thirty-five years of age, who had only two children, and whose family was consumptive. This was also a case of acute can-

cer, the duration being but fourteen months. The patient had been accustomed to indulge in luxurious food, and wore tight dresses, by which means constant irritating pressure was applied to a full bust. The axillary lymphatic glands were implicated, and I advised against an operation, which I have very little doubt would have been of no avail had it been performed. Case No. 311 is another instance of cancer, where the patient had had only one child, then twelve years old. She was thirty-six years of age, was a fleshy and well developed woman, full of vitality, but irregular in the menstrual function. Her paternal grandfather died of cancer in the face, and her mother of consumption, this side of the family being very tuberculous. The case was one which progressed rather slowly; it had begun in a tumor having a benign period of five or six years. No further history is recorded.

Group VII.—Women of seventy years and over.

There were eight cases in women who were over seventy years of age at the time of observation. Two of these, however, were cases of long standing; one, No. 29, having been the subject of mammary cancer at fifty-four years, which receded without an operation, the patient dying of cancer of the uterus at the age of seventy-six. The duration of the disease in this instance is estimated at twenty-two years.

Case 176, Aug. 3, 1867, is that of a lady who died of mammary cancer at the age of eighty-six, but who was first attacked at the age of forty-nine. She had never been pregnant, although living a long time married. The development was in the site of a blow, and commenced soon after the accident. The breast was removed in 1834. At the time of observation in 1867, she was eighty-three years old, and had had a return of the disease for about one year.

No operation was advised, on account of her advanced age, although the axillary lymphatic glands were not involved, but she survived three years longer, dying in 1870, at the age of eighty-six. The duration of the disease was, therefore, between thirty-three and thirty-four years.

The other eight cases began to develop at the following ages : Four of them at about sixty-nine years, one at seventy, one at seventy-four, one at seventy-six, and one at seventy-nine. The greatest age attained was eighty-six years, viz., case 176, noticed, who carried the disease over thirty-three years. It should be noticed that her grandmother died of cancer of the uterus.

Case 74 had a duration of five years, and was cystoscirrhous. The disease began in the site of a blow received three years previous to the discovery of the tumor, which was at the age of sixty-nine. She was then a strong, healthy, rather fleshy woman. She had a daughter, who died of general cancer not long after her own death. Case 91 began in the site of an abscess, and had a benign period of several years. Case 94 began its malignant development at seventy years, in the site of a blow that had been received five years previously. Both of these cases, 91 and 94, occurred in women of full habit of body, who had always had good general health. They had each had six children, were in good circumstances, and, although I have no record of their manner of living, it is presumable that it was not upon a spare diet. The only exciting causes are, in one case, an abscess, and in the other, a blow. Case 138 is noticed in Group IV., as is also case 74. In case 274 the disease began at the age of seventy-four in the site of an abscess in the right breast. The subject was a well-developed woman, of remarkably strong constitution, and with no trace of cancer or of consumption among her relatives. At the time of observation, at two

years' development, her general health was still good, and she survived two years and five months longer, making the entire duration of the disease, as noted, four years and five months; but it may have been longer. Case 335 began, at the age of seventy-six, as a malignant tumor. There is no record preserved of a blow, abscess, or other exciting cause. The breast — the right one — was removed in September, 1876, at the age of seventy-seven. The wound healed, and she remained well till the latter part of October, 1877, when, having severe pain in the side, she was given eighteen drops of Magendie's solution of morphine, and she died of narcotic poisoning; whether with the seeds of cancer in her system or not cannot of course be stated. There had been no apparent involvement of the lymphatic system, and one would lean to the opinion that it was a case of permanent recovery after amputation. The tumor in case 340 also developed in the site of an abscess which formed while nursing her first child, when she was a young woman. Six months previous to observation she fell and broke an arm, receiving a blow on the site of the abscess; and the malignant growth immediately followed the blow. Her health was then feeble, and she died within a year from the commencement of the disease.

This case goes to increase the number of those which, in my opinion, indicate that cancerous tumors have their origin in injuries or seats of irritation in constitutions prepared for the development of the disease, the constitutional condition being acquired by certain habits of living.

Group VIII. — Cases which present a history of cancer among ancestors or other blood-relatives.

This group includes 56 cases, or one-seventh of my whole number. Ten of them had a tubercular inheritance

as well. We fail to find the influence of heredity in six sevenths of the cases. It may be said that the probability of there being cancer in the families of a much larger proportion of these patients is very great. But would it not be straining the matter to suppose that as many as one third of the number really had relatives affected with cancer — absolute evidence being wanted? And then how should we account causatively for the remaining two thirds of the cases? They would have their causes, as I have elsewhere remarked, outside of that inheritance, and then we shall have to admit that those having "cancer relatives" were just as likely to be the subjects of the same causes.

Let us, therefore, examine the record to see whether we have not the usual number of causes other than heredity — causes that have been supposed to be active by many acute observers — if we add to the predisposing constitutional cause, errors in diet, and accompanying digestive derangements, and epithelial irritability. In four cases there is a history of mammary abscess. In eight cases we have the record of a blow. In four cases pressure from stays is noted. In three cases we find barrenness. In three cases we have defective functional action of the gland and of menstruation. In sixteen cases grief and anxiety are mentioned. In case 253 the breast had been operated on with caustic plasters before there was sufficient evidence of malignant disease. Here the caustic cannot be counted as an exciting cause, yet it may have been. In case 282 caustic was applied to the breast ten years previous to the time when the patient presented herself to me. The disease had then appeared in the cicatrix, and it is impossible, of course, to say with certainty that the malignant development was primarily in the cicatrix. But from the length of time which had elapsed between the

application of caustic and the condition when seen by me, the fair inference is that the caustic was applied to a benign tumor, if to any tumor at all, and that it preceded the cancer. This was developed in the wound, and in a patient greatly alarmed by the belief that she had inherited a now inevitable disease which was to destroy her life.

Thus, among these 56 cases of cancer which might be claimed as hereditary, we find no less than 38 which have other assignable causes recorded; and these causes are quite as numerous as in those cases which have no "cancer relatives." Upon a fair examination of these cases, therefore, heredity appears as a vanishing force, and can, not consistently be claimed as a proven cause of cancer.

My chief object in view in bringing out this aspect of the subject is the practical one of calling the attention of the profession to those causes which can be avoided; and, if all the causes of cancer are more or less avoidable, and if heredity, contrary to the common opinion, is not cause, great good must result from the adoption of such a view. As I have remarked in another place, if we regard heredity as a potent element in the causation of cancer, we naturally neglect other and important causes; but if the idea is erroneous we allow ourselves to be led astray by a will-o'-the-wisp, and needlessly alarm many of our patients. This is not all; by leading them to fear that they will become patients, we apply to them one of the really active causes, as I believe, of cancer, — fear, and the resulting depressing mental excitement.

Group IX. — Cases which present a history of phthisis among ancestors or other blood relatives.

There were 71 cases in which the subjects inherited phthisical tendencies or constitutions. Some remarks have already been made in regard to the relations of can-

cer to consumption, and they will suffice for all that might be said in this place. I may observe that the cases included in this group occurred in subjects who were in rather less prosperous circumstances than those having "cancer relatives," and for the very reason, as it would seem, that those who have "cancer relatives" have relatives who live luxuriously, are wealthy, indulge in the pleasures of the table, and, in many instances, do not take enough outdoor exercise to remove the constantly accumulating effete materials from the system.

II

DEDUCTIONS DRAWN FROM AN ANALYSIS OF THE THREE HUNDRED AND NINETY-SEVEN CASES RECORDED.

I WILL now endeavor to deduce from the foregoing cases the evidence they furnish as to the nature of cancer, particularly in regard to its etiology; fortifying my data, either in passing or afterwards, by comparing them with the observations of others.

I have already briefly touched upon the views held by the leading histologists as to the development of carcinoma. But even if it could be proved that all cancer cells are developed from connective tissue exclusively, or from epithelium exclusively, we should not thereby arrive at the etiology of cancer; we should only have discovered its histological nature, not its causes. These must be sought for — to a certain extent, at least — independently of histological questions. We shall have to observe the habits of individuals, of communities, and of nations, and their surrounding circumstances. We shall be obliged to look for causes which exist in civilized communities, and which are absent, or almost entirely absent, among barbarous or uncivilized communities, or among nations whose modes of life are essentially different from ours. For — and this is an extremely significant circumstance, — it has been found that barbarous and semi-civilized peoples are comparatively free — some tribes, indeed, are perfectly

free — from cancer. Then again we shall find communities among civilized nations who have certain peculiar habits, which somewhat resemble those of natural or rude peoples, who have very little cancer.

Now is there any one habit which is common to civilized people, that is not practised by primitive people, — as by the Egyptians or the Hindoos, — which can be thought to produce cancer? Can it be some peculiarity of diet? That could scarcely be contended. Is it living in cities? But the inhabitants of India reside in densely populated cities. Are the germs of contamination contained in the water which the inhabitants of civilized communities use as a beverage? The same negation must be given to this as to the last question. If drinking-water is anywhere rendered impure, it is in India. In England and Wales, cancer is much the most prevalent among those who dwell upon the banks of rivers and on alluvial soils; but that such situations do not generate cancer appears from the fact which has been stated, that cancer is almost unknown on the banks of the Nile. Does cancer belong to certain races? It is scarcely known among the native black population of Africa, but it is not uncommon among the negroes of this country; neither is it uncommon among domestic animals.

What explanation can be derived from these facts? They certainly do contain some clue, if we can but unravel it. Can the explanation possibly be in the doctrine of heredity? Has the negro, by dwelling among the white race, acquired a constitutional predisposition, which is transmitted? Has he contracted certain diseases by his transplantation from his native country, which have laid the foundation of such predisposition? This question is difficult of solution, but I think we shall have reason to believe the answer is not in the affirmative.

When we take into consideration the comparative prevalence of cancer among those who are addicted to certain habits, certain modes of living, among civilized peoples, and then compare these habits and modes of living with those of uncivilized communities, I think that a connecting link may be made out between cause and effect. Cancer is the most prevalent among peoples that are in the habit of living generously, and, as far as my observation has gone, among those individuals who are most addicted to luxurious habits, other things being equal, and more particularly those who are in the habit of eating highly-seasoned food, and who are more or less troubled with mal-assimilation, and consequent sympathetic irritation of the skin and mucous membranes.

Is cancer more prevalent among those nations which are addicted to intoxicating drinks? As intoxicating drinks are used, as a rule, by civilized people, more than by people who live in a state of nature, the answer must be in the affirmative. But if the question is whether cancer is more prevalent among individuals who are in the habit of freely using intoxicating beverages, we can hardly answer it in the affirmative. Cancer is more frequent in Paris than in London, but it is a well-established fact that the inhabitants of London use strong alcoholic drinks more freely than those of Paris.

Is cancer more prevalent among those nations whose people are immersed in the cares of life and in the accumulation of fortunes, and where anxiety and disappointment are common? It must be admitted that although wealth brings its cares, and struggling to amass fortunes its disappointments and blighted hopes, these do not affect so much the female members of the community; nor is mental affliction so great among those who live generously, as among the subjects of poverty and neglect.

Why, then, is not cancer more prevalent among the poor? This is answered by the fact that the other causes, such as idleness and luxury, do not operate.

Is cancer more frequent among nations which have been exposed to constitutional diseases, such as syphilis? Surgeons have occasionally noticed the similarity of some of the characteristics of the two diseases, such as the primary local development, and the constitutional contamination which follows. From intermarriage and the endless mixing of families, how many have escaped the remote effects of a disease so widely spread as syphilis was during the 16th, 17th and 18th centuries. The disease then produced the most frightful constitutional ravages, in a great measure in consequence of the want of knowledge how to treat it. It is well-known how many and varied are the forms of that dread disease, and how its fruits often appear where its seed was never suspected of having been sown. The appearance of cancer in domestic animals, however, that have never been known to be affected with syphilis, would seem to place the answer to the query regarding this disease as being causatively allied to cancer in the negative.

Walshe treats of the causes of cancer under three heads: *specific*, *predisposing*, and *exciting*. The specific are infection, contagion, inoculation, and venous injection; but as all these have been shown to be inoperative, his causes are reduced to two general heads — predisposing and exciting. The predisposing causes are considered as hereditary or acquired. In regard to heredity he makes the following remarks: "Whatever be our theory of hereditary influence, a satisfactory conclusion regarding its connection with cancerous disease can only be obtained by the well-advised application of the numerical method. The absolute demonstration of its reality would be the

discovery that, of a large mass of cancerous individuals, a very considerable majority were born of parents similarly diseased." He adds: "Additional confirmation of the fact would be had were it proved that the mean period of manifestation of the disease was materially earlier among cancerous individuals born of parents similarly affected, than among persons of untainted parentage." ("The Nature and Treatment of Cancer," pp. 145, 146.) I presume that these remarks will generally be regarded as just; and especially the last remark, that in patients inheriting a so-called cancerous taint an earlier appearance of the disease would be noted than in those who were not so tainted. I shall have occasion to apply these remarks to some facts found in my own statistics. How they may be affected by the records of others remains to be seen. According to Walshe the predisposing acquired causes are age, marriage or celibacy, menstruation, lactation, depraved habits, mental affliction, sustained intellectual labor, social condition, climate, and geographical location.

Now, can anxiety be a predisposing cause? Will a long period of care, trouble, and sorrow alone disturb the balance between the nervous and cellular elements, so as to make the latter take on an abnormal, a cancerous, development? It is more than probable; but can it be demonstrated? Perhaps not; but must we on that account reject the probability? Are we justified in rejecting every hypothesis which cannot be placed upon a demonstrated basis? Sometimes scientific truth is discovered by adopting hypotheses, and acting upon them as if they were established truths. Nor is a reasonable hypothesis in the case of so obscure a disease as cancer, which has baffled investigation for centuries, to be rejected unless we can point to a cause which is demonstrable. Are

we to refuse to accept a probable cause because we do not find a demonstrated one? Then we may probably never arrive at a conclusion, and, therefore, lose the advantages of instituting a rational method of treatment. But if we believe mental affliction to be one of the predisposing causes of cancer, we shall advise those who have apparently benign tumors in their breasts of the advantage of being cheerful. If we believe that generous living, and particularly the habit of eating heartily of animal food, is one of the causes of cancer, we shall advise the patients who consult us on the subject to live frugally; and if the community in general is warned by physicians that luxury and an unrestrained mode of living may encourage cancerous growths in any person when he arrives at middle age, those who attend to the admonition will be more careful in their habits. If want of personal cleanliness, bad ventilation, or any habits by which effete matter is either produced too rapidly or retained in the system, are likely to induce a constitutional predisposition to cancer, or to localize a predisposition already formed, then an avoidance of such causes will be more likely to follow the warnings of the physician than if such views of the causes are not held. These views, however, in regard to the etiology of cancer, are not founded on such prudential considerations, but on the great probability that it is in just these conditions that cancer has its origin.

Upon this point I make the following quotation from Walshe (p. 155): "Much has been written on the influence of mental misery, sudden reverses of fortune, and habitual gloominess of temper on the deposition of carcinomatous matter. If systematic writers may be credited, these constitute the most powerful cause of the disease; and although the alleged influence of mental disquietude has never been matter of demonstration, it would be vain

to deny that facts of a very convincing character, in respect of the agency of the mind in the production of this disease, are frequently observed. I have myself met with cases in which the connection appeared so clear and decisive, that to question its reality would have seemed to struggle against reason."

"But," again he says, as though not fully appreciating the physiological reason why, in fact, the influence of affliction must favor abnormal epithelial development, "the extent to which this works practically has doubtless been overestimated. It should be recollected that cancer is a very rare affection before the thirtieth year, and that the number of persons fortunate enough to reach that age without having suffered under disappointed hopes and wasting grief is in all probability comparatively small. Authors who dwell most strongly on this mode of causation of the disease curiously enough fix on the middle ranks of society as those furnishing the least amount of cancerous disease; yet these are precisely the classes in which reverses of fortune most frequently occur, and in which mental anxiety, inseparable as it is from professional and commercial pursuits, must be strongest and most constant" (pp. 155, 156).

These words from perhaps the most satisfactory writer on cancer require careful consideration. For reasons that have been given, we cannot doubt the influence of grief in causing cancer. But, in the first place, it is not at all certain that the middle ranks of society suffer the greatest amount of mental affliction or worry. On the contrary, the poverty-stricken have often the most over-burdening griefs: and, again, the wealthy and the powerful have imaginary or social griefs that are often quite as powerful in their influence, for they are fostered by nervous or hereditary excitability and by a heightened

faculty of morbid feeling, and stimulated by their ways of living. On the other hand the middle classes are mostly exempt from the other most powerful cause — that of over-feeding. Many of them live well, some over-eat; and this class furnishes its quota of cancerous disease: but the majority of them are not luxurious livers, and moreover take considerable exercise and keep their bodies free of effete matter. It therefore appears that these statements do not in the least affect the view that cancer has one of its causes in mental affliction, but rather uphold it.

In regard to heredity, there are some who believe that a certain state of the constitution *may* be transmitted as well as acquired, in which cancer is likely to be developed; but the matter is exceedingly doubtful, and my own statistics point to the opposite conclusion.

The belief is popular and widespread that cancer is an hereditary disease, and those who cannot trace a cancerous taint among their relatives as a rule entertain no fear that they will ever become its subjects. On the other hand, acting upon the theory of heredity, those who have relatives who are the subjects of cancer are apt to be alarmed at the slightest appearance of any tumor whatever, and causes other than hereditary are disregarded. The unfortunate descendant of a cancerous progenitor fears that he has the cancerous constitution, and that any tumor may take on a cancerous development; and thus he is kept in a state of constant alarm which favors the development of the very disease he dreads. Every wart or mole will be regarded with fear, and expected to begin at any moment a malignant warfare against the life of its hapless possessor.

How much better, if it be possible, that we should regard cancer as an avoidable affection! As long as we accept heredity as the most frequent cause of cancer, we

are more or less deterred from searching for other causes. On the contrary, if we have well-founded reasons for excluding heredity as a cause, we are impelled to make a more thorough search for others, and I believe much practical benefit will follow from such a course. We must find the causes, if we find them at all, in the habits of the people. I believe that a full record of the circumstances, state of health, habits of living, and the accidents to the parts affected with the disease, in one thousand cases of cancer, would go far — perhaps, indeed, it would be sufficient — to furnish data for a solution of the question of etiology.

An over-excited, injured, or weakened organ — a mammary gland, for example — may be the seat of the development, as well as an irritated primarily healthy organ. Cancer is, however, not a disease of early life, but of mature life. Among the 367 cases of cancer of the female breast, of which I have recorded a sufficient history upon this point, only four were among females under thirty years of age, and twenty-seven under thirty-five years of age. As the majority of cases are in subjects over forty-five years of age, it is not unusual to regard this as evidence that decadence of functional activity is a cause of cancer; but it may be only evidence that cancer requires, as a rule, a considerable period of time to produce that gradual change in the organism which constitutes the cancerous diathesis.

The derangement of the nervous system produced by the disturbance attending the discontinuance of such important functions as those of reproduction is undoubtedly great; but I call attention to the frequent development of the disease several years before the subsidence of these functions.

One circumstance strikes the surgeon in all the cases

of cancer of the female breast; namely, that the disease develops, as a rule, during a state of low activity. During the performance of the lacteal function the gland rarely takes on a cancerous development, and is not likely to do so during gestation. From the nature of the case this is what might be expected. An abnormal growth is not likely to take place in an organ during its period of activity; in fact, the performance must be so accompanied by healthy action that unnatural malignant development can find no place. There are a few cases, however, in which the growth takes place rapidly during lactation or during gestation, but they are rare; and it is more than probable that a commencement had already been effected in such cases, and that the excitement of functional activity sometimes acts as a stimulus to the abnormal growth.

III

THE DOCTRINE OF HEREDITY — THE GEOGRAPHICAL DISTRIBUTION OF CANCER — THE INFLUENCE OF CIVILIZATION IN THE PRODUCTION OF CANCER — SUMMARY OF THE CAUSES OF CANCER.

We are now in a position to sum up the evidence, as far as these cases can assist us, on the question of heredity in cancer. I approach this vexed question with diffidence, and with a feeling that it requires to be treated with the greatest candor, and with deference to the testimony of others, in order, as far as possible, to avoid falling into error. All the relations of cancer, its geological and geographical distribution, its frequency among different races of mankind, its occurrence in different states of civilization, its relation to social habits and sanitary conditions, must be taken into account. I will endeavor to state briefly the chief points in the arguments both in favor of and against the doctrine of heredity; first considering the arguments deduced from data furnished by others, and afterwards inquiring how far the conclusions thus derived are modified by my own observations; and endeavoring, from a survey of the whole field, to find the direction which its investigation ought to take.

It was stated by Sir James Paget, in a discussion on the subject, held by the Pathological Society of London in 1874, that when he was principally engaged in hospital practice he could trace the inheritance of the disease in

about one case in six. When he came to know something more of private practice he says that he could count one in four. "Now I can," he says, "without difficulty, count, as actual facts, not less than one in three, of all my patients with cancer, in whose families the occurrence of cancer is well known. But this number does not nearly represent what we may very safely assume to be the predominance of inheritance in cancer. A large number of persons die of internal cancer, and convey it to their offspring, though it is never known that they themselves have been the subjects of cancer." (See report of discussion in the London *Lancet*, March 21, 1874, and also in the *Journal of the Pathological Society*.)

Now, without discussing the question as to how far we have a right to assume that persons often die of cancer without the fact ever being known, if we admit that one third have inherited the disease, let us ask how much probability there is that the remaining two thirds, who can trace no connection with cancer, have inherited it? That is to say, what probability is there that the two thirds who can trace no inheritance still have the disease by inheritance? How far are we to accept the statement of Sir James Paget that "a large number of persons die of internal cancer, and convey it to their offspring, though it is never known that they themselves have been the subjects of cancer?"

Most cases of internal cancer are secondary, and follow a primary tumor whose existence is generally known, or pretty well made out, even in cancer of the stomach. The liver is the internal organ most often affected, but probably three fourths of the cases of cancer of the liver are secondary (Rindfleisch). Admitting, now, that there are one sixth as many cases of primary cancer of the liver as there are of the breast, and that there are one third as many

cases of primary cancer of internal organs, excluding the uterus and rectum, as there are of the uterus and breast, the number of cases in which such cancer patients have ancestors in whom cancer can be traced is much too small to admit the element of heredity. More than half of all the cases of cancer met with, if we give the element of heredity the widest possible influence, must therefore be accounted for in some other way. In other words, it must be supposed that the disease has been acquired. But if we have the strongest reasons for believing that cancer has been acquired in half the number of cases, what reasons have we for believing that it has not been acquired in the other half of the cases also? The strongest advocates of heredity claim that it is associated with "*cancer relatives*" in only one third of the cases. How are those cases which are not transmitted (if any are transmitted) acquired? Certainly in the habits and circumstances of the patients. Now if one half of the cases may be acquired, all may. Note that we have here a question entirely different from that of the transmission of tubercle. A tubercular parent usually begets a child with a perceptibly marked strumous constitution. If the exceptions to this rule were as frequent as they are in cancer, it would be difficult or impossible, even in this disease, to trace heredity, although (and this is not the case in cancer) a constitutional tendency is early manifested. Of course there is a tendency in cases of tuberculosis to the return to a normal type of nutrition; and the other parent, if vigorous, may impress a healthy tendency upon the offspring; still the strumous diathesis will generally be apparent in the organization of the child. In the transmission of syphilis we see more plainly still the marks of heredity, and when a child is born with syphilis, or shows symptoms of the disease when no contamination has been pos-

sible since birth, the disease can certainly be traced to a progenitor.

To return to the question: What is the importance, as an evidence of heredity, of the fact that in a certain circle of a surgeon's practice he finds one third of his cases of cancer connected with other cases by blood relationship? Its importance is overestimated by reason of a simple numerical fallacy which is generally overlooked in the argument. Let us ask this question: What is the average number of persons belong to the family of one's ancestors, say, for four generations back? Assuming that the average number of children of a married pair is four, then, in the families of immediate parents there would be eight individuals who must be counted as relatives. Every person would thus count among the families of their four grandparents, on an average, sixteen individuals, and the generation of the eight great-grandparents would number, in the same proportion, thirty-two. In the fourth remove the number would be sixty-four, and in the fifth one hundred and twenty-eight. Adding these numbers together gives two hundred and forty-eight persons involved in the comparatively direct family connection of one person in the fifth degree of ascent. If we include only four generations, that from the families of great-grandparents, the number involved will be one hundred and twenty, and, by including the descending relationships from these, the number would reach several hundreds.

Now, according to reliable statistics, the proportion of deaths from cancer to that of all other diseases is about one in one hundred and twenty-five. Therefore it would seem to be quite in accordance with the laws of chance that there should often be found — certainly as often as once in three times — a person who could count one or more cases of cancer in the families of ancestors and blood

relatives for three or four generations back, even taking into account the possibility of the existence of unknown cases of internal cancer.

Let us now remark further, that while we thus have one case of cancer connected with one or two cases among one or two hundred relatives, one or two hundred persons have relatives or ancestors who have died of cancer, but none of them are themselves the subjects of cancer. Looking at the incurable nature of the disease, which in this respect presents a strong contrast to consumption and syphilis, and the time during which it has existed, we could hardly expect a single member of a civilized community, were the disease hereditary, to have escaped it. Would not a disease that was at once hereditary and incurable have necessarily contaminated the whole race?

Nevertheless, it is a fact which requires careful and candid consideration that in some families there will be several cases of cancer, a fact strongly pointing to some powerful common cause; if not to inheritance, then to habits and modes of living, which have been practised by the members of the family, and which are sufficient to induce the disease. It is possible that in some cases persons may inherit constitutional tendencies by which they are liable to be influenced by external agents. They may inherit constitutional weakness of digestive organs, or irritability of the skin and mucous membranes, as well as they may, by habits and circumstances, acquire such weaknesses and tendencies; but this is not inheriting a disease in the way that scrofula and syphilis are inherited.

It must be admitted that the investigation of the etiology of cancer is one of the most vexed and difficult subjects belonging to medical science. It has received more attention, and that through a longer space of time, than any other, and much diversity of opinion still prevails. One

of the latest contributions to the subject of cancer is that of Dr. Alexander von Winniwarter, a study from the cases of Prof. Billroth's private and clinical practice. Although he does not positively dispute the influence of heredity, from an examination of his cases he lays but little weight upon it. He says, "The statements of some English authors who have taken up the subject are merely worthless, because they are based upon entirely superficial diagnosis, and extracts from public death registers, which have been prepared by laymen. Until we have more carefully prepared statistics we cannot tell whether the doctrine of heredity will be strengthened or weakened. Of 170 cases in which hereditary taint had been inquired into, two had 'cancer relatives,' or 5.8 per cent, or $\frac{1}{17}$ of the whole." Again he says: "According to Paget and Velpeau, the number of cancer patients who have cancer relatives is as 1 to 3 to those who have not. According to Sibley, there are 8.75 per cent, or one in about eleven cases, and that is nearly what is found in the cases in this book, or 8.8 per cent of cases of cancer of the breast. Among German surgeons there is not much information upon this point, and I do not think the hereditary disposition is of as much consequence as is supposed by some."

Now, what evidence is there that cancer is developed by habits and circumstances of living, by geographical and other causes, independent of hereditary influence? In regard to the geographical relations of cancer, much information has been collected, and the statistics thus furnished will be useful in making an inquiry as to what probable influences the habits of communities of the globe have had in the production or non-production of the disease. "In St. Helena during ten years, between 1826 and 1835 inclusive, among the civil and military population of that island there were 552 deaths, only two of which were

attributed to cancer." This is only 1 in 276, or less than half the average of cases in Great Britain. Here we have the statistics of a civilized European population, enjoying many of the luxuries of life, but at the same time living in a remarkably pure and salubrious atmosphere. "At Algiers (from the *Gazette Médicale d'Algier*), among the 5561 deaths which took place during the years 1852, 1853, and 1854, 37 deaths are recorded," or one in about 150, less than half the average (Haviland, *Geography of Heart Disease, Cancer, and Phthisis*, p. 90). Walshe, in his classical book on cancer, as long ago as 1846, has the following:

"The maximum amount of cancerous disease occurs in Europe, as compared with other quarters of the globe. I have but few documents illustrating the relative frequency of the disease in different regions. The following table exhibits a most striking excess in Paris, over London:—

	"Ratio per cent of deaths from cancer.	
	To total deaths.	To population.
"London (1841)	0.83	0.02
Paris	2.54	0.78
Verona	0.75	..."

(Walshe on the "Nature and Treatment of Cancer," London, 1846, p. 160). The author remarks that the first of these numbers is given by M. Tanchou, the second (for 1830 only) is calculated from a paper in *Journal Comp. du Dict. des Sc. Méd.*

"In Asia the disease appears to be much less common. Of a total number of 30,102 cases admitted into the Hobart Town Hospital in Tasmania during twelve years, there were but four cases of scirrhus. In the pages of the

Calcutta Medical Journal, a passing remark on the infrequency of scirrhus and encephaloid among the Hindoos is occasionally found; and their import is confirmed by some statistics recently published in the male and female hospitals at Calcutta (Appendix to Annual Report of Medical College of Bengal, session 1844-45). Among 4080 males admitted during a space of three years, three only were affected with cancer, and among 701 females admitted during two years, two only were cancerous — in both, the uterus was the organ affected" (ibid., p. 160). "In China," the author remarks, "the population suffers to a greater extent than this, and that the course and ravages of the disease are the same among the Chinese as ourselves is shown most graphically in a series of drawings (which I have now before me, from the museum of University College); executed by native artists from specimens occurring in their countrymen." "The inhabitants of Africa appear to be specially exempt from this disease. Clot Bey dwells upon its rarity among the Egyptians, female as well as male, and curiously ascribes the infrequency of uterine cancer to the women's habit of wearing drawers, whereby the genital organs are protected from eddies of cold air. M. Hamon (who is said by M. Tanchou to have passed fourteen years in the service of Mehemet Ali), never observed the disease among the indigenous female population, and but very rarely among the Turkish. M. Bax (quoted by M. Tanchou) met with no case of the disease either in Algiers or Senegal during a period of six years. Nor do the tables of mortality for Algiers for 1841 and 1842 attribute death in any instance to cancer. M. Ponzin treated about 10,000 native Arabs with not more than one case of cancer; the disease was of the breast of a female." (Walshe, p. 161.) He then gives American statistics of that time,

which I omit, and goes on to say, "The foregoing survey, imperfect as it necessarily is, suffices to show that certain regions of the globe are peculiarly exempt from the ravages of cancer. But is this exemption to be really referred to the special influence of climate, or of some concomitant condition? Wherever the disease is particularly rare it may be remarked that a low state of civilization prevails: wherever social organization is of a highly perfect kind, there cancer flourishes. May we then infer, that, as has more than once been contended, cancer, like insanity, follows in the wake of civilization; and that as the ferment of a high state of social advancement is among the most active causes of destruction of intellect, so too, it plays a prominent part in generating one of the most terrible physical evils to which humanity is subject?"

My own observations tend to corroborate this statement, for it is a noteworthy fact that a majority of my cases occurred among people in good circumstances, many of them wealthy, and living luxuriously, and that as a rule the most rapid and malignant cases were among those surrounded with the greatest comforts. Walshe remarks: "It is curious that even the lower animals appear to acknowledge a somewhat analogous influence; it will presently be seen (p. 170) that they are much more subject to the disease when in a state of domestication than in their natural wild condition" (ibid., p. 161).

Now, what are some of the conditions present in a high, and absent in a low state of civilization? One of them is established wealth, and a state of luxury. The appetite for eating meat and highly seasoned food is indulged, and can be regularly and habitually indulged, only in a state of established civilization, with communities engaged in accumulating fortunes and vieing with each other in sumptuous living. Savage and nomadic people, or people not

addicted to regular and systematic industry, do not produce enough food for a luxurious mode of life, and, as a rule, animal food is scarce. Hunting and fishing are pursued to a considerable extent by some wild or barbarous people, but they are only occasionally large eaters. They more often, and particularly the women, go for long periods with very frugal fare. They often have, from necessity, long fasting periods. The Hindoos live upon rice and have no cancer. The Chinese eat more animal food, are not cleanly, live in a way to retain much effete matter in the system, and they have cancer.

The North American Indians are not subject to cancer. Among the Zulus, Dr. Lindley, who resided many years in their country, never saw a case.

In regard to the lower animals, those in a wild state do not, as a rule, get enough to eat, and they do not live as well as domestic animals. Wild animals are, as a rule, half starved. The domestic dog and cat are over-fed. The wild animals do not have cancer, the domestic animals do. These questions are pertinent, therefore: Does a low diet tend to alleviate cases of cancer? Has a low diet been known to prevent its development?

The latter question is unanswerable, for no one can say when cancer has been prevented; but in regard to the effect of abstemiousness on cancer I can speak with great positiveness, that a vegetable, or at least a very bland diet, does check the progress of the disease, and, in some cases now under treatment, has been attended by an alleviation of the symptoms; and, in a few instances, even by a recession of the growth.

It is well, and in fact indispensable, that the histology of cancer should be carefully studied, and the labors of minute anatomists have been of great service; but there has been a disposition to rely too much on working with

the microscope as a means of arriving at ultimate causes, and the consequence is that there has not been as much advance in the etiology and *nature* of the disease, as if more reliance had been placed upon the labors of older surgeons.

The following passage, written by Sir Astley Cooper, more than half a century ago, shows a broader and more enlightened view of the subject than is contained in the writings of some more recent observers, who have supposed that they were working far in advance of the great English surgeon.

"*Cause of Scirrhus.* — The cause of this disease is supposed to be some accidental blow, or the pressure of a part of the dress; but although a blow may produce a swelling on the bosom, yet that swelling will not be of a scirrhous nature unless some defective state of the constitution disposes to malignant action. If the constitution be good, the effects of a blow are speedily dissipated; but if the constitution be faulty, the swelling grows into a formidable disease. The complaint is in part constitutional, in part local. It is constitutional in so far as the disposition to malignant action is produced by the state of the habit. It is local also, because the action in the part is peculiar, and the result is a specific effusion different to that of common inflammation." ("Lectures on Surgery," Boston, 1825.)

Now what are the effective causes of cancer? Heredity, as has been shown, may be ruled out almost wholly. The system must be prepared for the disease, or else why is it that in one case at a given period a frequently exciting cause may be entirely inoperative, and at another time the disease may follow the cause? Why should the body, after being subjected through a number of years to blows, cuts and other forms of injury, resist the disease,

and yet subsequently succumb to a cancer which succeeded the same kind of cause? In my opinion the tissues must have undergone some unknown transformation which will permit the possibility of cancerous development, and it is at this period that an exciting cause may bring on the disease. This condition of the system depends upon the following circumstances:

First. — Luxurious living, and particularly excess in animal food, increases the waste products of the body, and, if coupled with insufficient exercise, the waste products are retained in the system and have a tendency to produce abnormal growths. Whether living in a malarious atmosphere would assist luxury in producing cancer may be a question. Of itself it would of course be inoperative, as it is very rare among the Hindoos.

Second. — Local irritation of an epithelial surface, as the pressure for a great length of time against the breast of the point of a corset, particularly if the glandular apparatus has been irritated by disordered function or inflammation. The presence of a cicatrix in the seat of a former abscess is probably one of the most powerful of the exciting causes of cancer; but it must be considered that the constitution requires to be brought into a certain condition before exciting causes will operate. It has been noticed by some observers that cancer patients are frequently the subjects of eczema: not that there is any relationship between the diseases, but that they love the same soil to grow in. There is probably a local relationship between rheumatism and cancer, in so far as rheumatism is an expression of faulty digestion or assimilation, which is more or less productive of epithelial and epidermic irritation. The cancer chart and the chart of heart disease of S. Haviland, show a certain degree of resemblance in the distribution of the two diseases, while consumption is shown to be most

prevalent where cancer is the least so. Cancer, for instance, is common in London, and most frequent among those who live sumptuously; it is present along alluvial bottom lands, where the soil is rich, and the air less fitted to remove waste material from the body, where the people live more indolently and luxuriously than upon the higher lands. In a more salubrious atmosphere, as in the mountains of Wales, in portions of Westmoreland and Lancaster counties, England, and on the island of Anglesey, there is a minimum of the disease.

Third. — Mental affliction. This is a mooted question, but aside from the conclusions of some of the best thinkers and the evidence of statistics, there are the strongest physiological reasons for believing that great mental depression, particularly grief, induces a predisposition to such a disease as cancer, or becomes an exciting cause under circumstances where the predisposition had already been acquired. The nervous system is a controlling factor in all the functions of the body, even in those of seemingly so mechanical a nature as perspiration. How often do we see the sweat stand out in great drops almost instantly under certain emotions! The connection between all epithelial cells and the termination of nerve-fibres is now known to be very intimate, and a disposition on the part of the nervous system to neglect its duty in that direction must certainly allow of an easier departure of the epithelial cell in an abnormal direction. In a person of more than ordinary vitality, where the epithelial cells contain a full share of living matter, what great risk must there be of an abnormal proliferation in the direction of that growth which is known to be associated with surplus vitality — cancer! In fact it is a logical deduction from all that is known of the physiology of the system and of the pathology of cancer, that mental affliction must add to

the chances of a development of cancer. It is a fact that grief is especially associated with the disease. If cancer patients were, as a rule, cheerful before the malignant development made its appearance, the physiological theory, no matter how logical, must fall; but it is otherwise. The facts substantiate what reason points out.

Fourth. — Dysmenorrhœa and other uterine irregularities. If the theory that a withdrawal of the vigilance of the nervous system from the epithelial functions tends to allow them to take an abnormal development, then dysmenorrhœa and disordered uterine function in general must be admitted as a factor in the causation of cancer. How much may the nervous system be disturbed, its controlling powers overthrown, the mind unhinged by the distracting influence of disordered uterine function, with hysteria, ecstacy, mania, and milder forms of insanity as the result! Let, however, the will of the person preserve the mental balance, and allow the great estrangement to take place between the nervous and epithelial functions, or let any circumstances allow of such estrangement, and how much more readily may the proliferation of epithelial cells take on an abnormal character!

Many of the questions suitable to a systematic work on cancer have been left out in this inquiry. The matters of diagnosis and prognosis have received adequate attention by many writers, and there is but little more to add about them. As to treatment, that I consider to have very practical relations to the idea which has been brought prominently forward here, viz., that cancer is to a great degree one of the final results of a long-continued course of error in diet, and that a strict dietetic regimen is, therefore, a chief factor in the treatment, preventive and curative.

I have in this inquiry avoided going into a discussion of the histo-pathological questions which are now being

pushed with great energy and industry by the younger members of the medical profession. I leave them to the pursuit of the ardent and enthusiastic students, who have already done much and will certainly do more to illustrate the protean powers of nature, particularly when under the impulse of morbid conditions.

The question to which I have chiefly addressed myself lies behind these histo-pathological inquiries, and is, What are the conditions of the system, and what are the habits and circumstances that have brought about these conditions under which this abnormal development, this riotous formation of cancer cells, is possible? What can the individual eat, and under what circumstances of assimilation, of nutrition in general, through what irritations, what imperfect processes of elimination of effete matter, can the individual pass to become the subject of cancer proliferation? How long must the normal cellular elements of the body be subjected to those influences before they will consent to take their "new departure?"

Some very practical hints as to treatment may be taken from what has gone before. Avoid the so-called predisposing causes, *i.e.*, unnecessary luxury in mode of life. Especially abstain from eating food rich in nitrogen. Urge your patient to take sufficient exercise; point out to her the necessity of cleanliness, and of avoiding all articles of dress that would induce irritation of the skin by pressure. Persuade her to cultivate cheerfulness of disposition, and regulate her various functions, particularly that of menstruation. All this will tend to forestall the development of the disease.

But let it be supposed that we have a case of cancer to deal with. There is such a *consensus* of opinion as to the advisability of early removal of the growth, that a discussion of this subject would be useless. So, then, in the first

place, let us remove the tumor, and thoroughly. But after we have done so, after we have taken it out by the very roots, is this sufficient? No. We must then adopt the means stated above to prevent a second development.

We must change the diathesis; we must seek to modify the patient's constitution so that it will be no longer prone to reproduce the disease; and then only may the surgeon be satisfied that he has done his duty.

THREE HUNDRED AND NINETY-SEVEN CASES

OF

CANCER OF THE FEMALE BREAST.

Date.	Number.	Civil Condition.	No. of Children.	Breast involved.	Axilla involved.	Family History.	Manifestation of Disease before or after Menopause.	Age at Commencement.	Age at Operation or Observation.	No. of Operations.	Duration of Disease.	Lived after Operation.	Variety of Cancer.	Group.	Physical Condition.	Assigned Exciting Cause.	General Remarks.
Apr. 1, 1830	1	married	several	left	1		before	40	42	1	4	2	hard	5	thin; good health	much care	Lancinating pains.
Mar. 2, 1831	2	single		not recorded	0	consumptive relatives	before	34	37	1	10 +	8 +	hard	1, 6, 9	well developed, good health	dysmenorrhœa	This patient had had caustic applied about 3 years before operation. About 1 year after application of caustic, began to develop rapidly. It may be questioned whether the cancer did not originate in the scar produced.
June 3, 1832	3	married	several	left	0		before	40	42	1	14 +	12 +	hard	2	full; good health	no record	Died of cancer of liver 12 years after. The diseased organ weighed 12 lbs. Had had tumor of ring finger, which was amputated 2 years before date.
May 9, 1835	4	married	8	right	0	mother & aunt died of cancer of the uterus, sister of cancer of breast	before	38	40	1	29	27	hard	2, 8	well developed, good health	mammary abcess twice and but little milk	Lancinating, burning pain. Called on me 27 years after operation and was well.
May 25, 1835	5	married	3	right	1		before	37	38	1	8	7	soft	2	fleshy, good health	never nursed in right breast	Was living in 1843.
Mar. 19, 1838	6	married	4, youngest 7 yrs.	not recorded	0		before	35	40	1			hard	5	full, good health	anxiety	Tumor of 5 years' standing, in which there had been frequent lancinating pain, after some growth there was a tendency to atrophy, but within the last three months progressive development with increased pain. Removed whole organ; wound healed, but had lancinating pain. No further record.
April 8, 1841	7	married		right	1		before	45.4	46	1	1.1	5 m.	soft	3	fat, good health	no record	Had severe pain in spinal cord. Died of general cancer; liver, lungs, and other organs more or less infiltrated with disease.

July 10, 1842	8	married	several	right	1		before	45	47	1	24	22	hard	2	full, good health	no record	Nipple retracted, skin adherent, growth slow, tumor not large. An issue was made in the arm immediately after the operation and kept in for many years; was well in 1864.
Oct. 12, 1842	9	widow	4	left	1		before	not recorded	48	1	10	10	hard	1	full, good health	inflammation 16 years before operation	Had a tumor 16 years, since inflammation which became painless. The child was weaned. Nipple now retracted and skin puckered; had dysmenorrhœa when young; was living 10 years after operation.
Aug. 7, 1845	10	single		not recorded	0		before	44.6	45	1			hard	5	well developed, good health	pressure of stays	Recovered from operation; no further record.
Oct. 2, 1847	11	widow		not recorded	not recorded		after	62	64	1	4	2	hard	5	full, good health	no record	
Nov. 30, 1847	12	married	2 and pregnant	left	0		before	41	42	1	2.6	1.6	hard	5	full, good health	no record	Amputation March 30, 1848. June 16, 1848, miscarried. Disease returned in axilla in 18 months, and patient died June 28, 1850.
July 22, 1848	13	married	youngest 9 m.	right	1		before	36.6	37	1	1	5 m.	soft	3	full, good health	no record	Wound healed in 11 days, but disease soon returned in axilla from whence glands had been removed.
Aug. 15, 1848	14	widow	6	right	1		after	54	55	1	2.6	1. 6	hard	5	thin, good health	abscess at point of tumor	Tumor has grown rapidly during last 4 months, with lancinating pain. Is now as large as a small orange: menses ceased 3 years ago.
Feb. 24, 1849	15	married	1, 11 yrs. old	left	0	consumptive relatives	before	37	38	1	19	18	hard	1, 9	fat, good health	affliction, dysmenorrhœa	Tumor commenced in breast at 20 years, and was painful during menstruation; during last year has developed rapidly.
June 5, 1849	16	married		right	0		before	36.6	38	1			hard	5	fat		No further record.
June 14, 1849	17	married		left	0			not recorded		1			hard	2		never nursed from breast.	
June 16, 1849	18	married	several	not recorded	1	consumptive relatives	before	44.6	46	1	3	1.6	hard	5, 9	full, good health	no record	Axillary glands removed.

Date.	Number.	Civil Condition.	No. of Children.	Breast involved.	Axilla involved.	Family History.	Manifestation of Disease before or after Menopause.	Age at Commencement.	Age at Operation or Observation.	No. of Operations.	Duration of Disease.	Lived after Operation.	Variety of Cancer.	Group.	Physical Condition.	Assigned Exciting Cause.	General Remarks.
Dec. 30, 1850	19	married	5	left	1 and skin	consumptive relatives	before	42	45	3	6	5 after 1st, 1 after 2d	hard	1	full, good health	dysmenorrhœa, did not nurse last 3 children	Has had a tumor in this breast 15 years. Commenced to grow and be painful during last 3 years. First operation Dec. 30, 1850; 3d operation May 2, 1854. Have no record of date of 2d operation. Died within 1 year after 3d operation.
Aug. 5, 1851	20	married	several	left	0		before	39.6	40	1	2	1.6	mixed	5	fat, good health	no record	A remarkably well developed and apparently healthy woman, belonging to a healthy family with no trace of cancer.
Oct. 17, 1851	21	married		right	0		at	49	50	2			hard	5	well developed, good health	no record	A person of remarkably fine physique, with an excellent family record in every particular. 2d operation Jan., 1853. No further record.
Nov. 17, 1851	22	widow	1, still born	right	0	consumptive relatives	before	45	47	2	10 +	8 +	hard	1.9	full, good health	still-born child 10 yrs. before operation; inflammation	In the beginning of 1850 the right breast sloughed, destroying the nipple, producing intolerable stench. Amputation Nov., 1850. The wound healed and remained pretty well until Christmas, 1857, when it again ulcerated. In March, 1858, a mass was removed, and in the September following she returned to the clinic apparently well. Died more than 3 years afterwards, precise date cannot be given.
May 11, 1852	23	married	2	right	0	consumptive relatives	before	48.6	50	6			soft	2.9	well developed, good health, now anæmic	dysmenorrhœa; blow 3 mos. before discovery	No retraction of nipple. Did not conceive until 12 years after marriage. 6 operations. 5th operation, May 18, 1854, removing some hard nodules from skin. Three varieties of cancer: scirrhus, colloid, and encephaloid, each grading into the other.

July 10, 1852	24	married	6	right	0	consumption in 2 brothers and sister	after	43.6	44	1			soft	3.9	good health	blow	Menses seen but once in 7 years; has had rheumatism: 12 months ago a small tumor appeared, which grew slowly for 6 months. Patient then fell and struck the part, when it commenced to grow rapidly. Pain at first dull and aching, then sharp and lancinating. No further record.
July 17, 1852	25	married	0	right	1		before	27.6	28	0	1 +	6 m.+	soft	3.6	large, fat, good health	no record: dysmenorrhœa	Whole breast infiltrated. Dysmenorrhœa before marriage. Tumor had considerable lancinating pain.
Sept. 2, 1852	26	married	7	left	0	consumption in brother and sister	after	58	62	1	15	11	hard	2.9	fat	abscess 22 yrs. ago	Tumor weighed 2 lbs. Was living 11 years after operation, and there was then no return of disease. No further record.
Sept. 8, 1852	27	widow	1	right	1	consumption in father and mother	after	54	55	1	1.6	6 mos.	mixed	3.9	full, good health	blow and pressure	Child died soon after birth; has lancinating pain which is now intense. Tumor discovered one year ago, size of hazelnut.
May 20, 1853	28	married	several	left	0		before	40.6	41	1	20.6	20	hard	1	well developed, good health	never nursed from left breast, abscess, blow when young	A small tumor continued from the time she had the abscess, in a quiescent state until about 6 months before I saw her, when it commenced to grow rapidly, with severe lancinating pain. This patient called on me May 12, 1876, was well, and had had one child since the operation. April 3, 1878, still living and well.
May 26, 1853	29	widow	several				at	54	76	0	22		hard	1.7	well developed, good health	no record	Died of cancer of uterus at 76. At 54 years she had a mammary tumor which became atrophied, and was pronounced cancer.
Jan. 17, 1854	30	married	several		0	consumption in mother and sister	at	51.7	52	0	1		soft	3.9	fat, had had good health	no record: dysmenorrhœa	
Dec. 18, 1854	31	married		left	0		before	35	37	1			hard	5		never nursed	Recovered from operation. No further record.
Nov. 21, 1855	32	single		left	0		before	37	38	1	18	17	hard	1	good health		Had a tumor 9 years, which has grown rapidly during last year previous to operation. Was living and well in 1873.

Date.	Number.	Civil Condition.	No. of Children.	Breast involved.	Axilla involved.	Family History.	Manifestation of Disease before or after Menopause.	Age at Commencement.	Age at Operation or Observation.	No. of Operations.	Duration of Disease.	Lived after Operation.	Variety of Cancer.	Group.	Physical Condition.	Assigned Exciting Cause.	General Remarks.
Nov. 30, 1855	33	married	7	right	1		before	43	41	1	1.8	8 mos.	soft	5	nervous	no record	Nipple not retracted, and but little pain.
Feb. 2, 1856	34	married	11	left	1 and skin		before	41.6	42	0	11 mo.		soft	3			
Apr. 27, 1856	35	married	6	right	1		before	44	45	1	3	2	hard	5		no record	
May 15, 1856	36	married	4	left	0	consumptive relatives	at	45	47	1	2.6	6 mos.	hard	5.9		no record	Tumor began in skin and extended to lower border of gland.
Mar. 22, 1856	37	married	several	left	0	consumptive relatives	before	33	34	2	3	2	hard	5.6 .9	full, good health	no record	Lived 2 years after 1st operation. 2d operation April 3, 1858. Cousin of case 140.
Oct. 5, 1856	38	married	several	right	1	aunt, cancer	before	43	42	2	3.6	2.6	hard	5.8	fleshy, good health	blow in 1855, soon followed by disease	First operation Oct. 5, 1856; 2d operation Sept., 1858. Died April, '60.
Oct. 26, 1856	39	married	several		1		before	41.8	43	1	1.10	1.6	soft	5	full, good health	no record	
Feb. 3, 1857	40	married	3	right	0	sister, cancer of ovary	before	36	37	1	10.6	10	hard	2	full, good health		Commenced during lactation. 2 years after operation had hepatalgia; in spring of 1870 had epithelioma of cervix uteri. Died Nov., 1870.
Apr. 17, 1857	41	married	several	left	1		at	52	53	1			hard	1	full, good health	no record	Fourteen years before had a small tumor in skin of breast; commenced to develop rapidly 1 year ago. No further record.
June 4, 1857	42	single		right	0		before		41	1			hard	5		no record	Recovered, lived several years. No record of dates.
July 6, 1857	43	married		right	0		before	33.6	34	1			hard	5	full, good health	no record	No further record.

Sept. 9, 1857	44	married	0	right	0		before	48	50	1	8	6	hard	2	well developed, good health	affliction	Remained well until 1862. Died Oct., 1864.
Oct. 19, 1857	45	married		right	0				49	1			hard	5		no record	No further record.
Nov. 25, 1857	46	married		left	1		after		60	1		28 h.	hard	5	fat, good health	no record	Patient sank, having profuse serous effusion from wound in 28 hours; mass dissected from axillary vein for a space of 2 inches.
Nov. 27, 1857	47	single		left	1		before	33.6	34	1			hard	1.6	full, good health	blow 4 years before	Wound healed kindly; gland in axilla removed. Lived several years, but no record of dates.
Dec., 1857	48	married	4	right	1		before	33.6	34 obs.	0	1.3		soft	3.6		no record	Growth rapid.
Jan. 18, 1858	49	married	several	left	0		before	37.6	39	1	2.6	1	hard	5	thin, good health	no record	Disease returned in axilla and internal organs, and died in 1 year after operation.
Apr. 26, 1858	50	single		left	0	consumption	before	37	38	2	3.6	2.6	hard	5.9	well developed, good health	no record	Second operation Dec. 4, 1860.
Dec. 28, 1858	51	married	several, youngest 7	left	1		before	37.7	39	1	3.6	2.1	hard	5	full, good health	blow while nursing last child	Disease returned in 8 months before death. Secondary disease in liver. Had dyspepsia.
March, 1859	52	married	3	left	1		before	35.4	36	1	1.2	6 m.	soft	3.6	fleshy, nervous, good health	no record	
Sept. 13, 1859	53	widow	0	left	0		at	49	50	1	3.10	2.10	hard	5	well developed, good health	no record	Healed slowly; Nov. 10, wound not closed.
1859	54	married	6	right	0	consumption	after	60	62	0	3		hard	1.9	moderate health	blow 6 years before	Died Feb. 8, 1860.
Oct. 12, 1859	55	single		left	0		at	46.6	48	1	18.6	17	hard	1	full, good health	blow	Has had for 17 years a small tumor on edge of pectoralis major. An issue was made in the side and kept there many years. Wound healed by 1st int. Oct. 12, 1876. Patient called, was well, issue still open, cicatrix in good condition.

Date.	Number.	Civil Condition.	No. of Children.	Breast involved.	Axilla involved.	Family History.	Manifestation of disease before or after Menopause.	Age at Commencement.	Age at Operation or Observation.	No. of Operations.	Duration of Disease.	Lived after Operation.	Variety of Cancer.	Group.	Physical Condition.	Assigned Exciting Cause.	General Remarks.
Nov. 1, 1859	56	married	?	right	0	grandmother and mother, cancer of breast.	at	45	46	4	5	4	hard	5, 8	good health	caustic 4 times	Saw her in fall of 1859; advised removal, but she went to a "cancer doctor" and was treated with caustic plasters. Died in 1863, aged 50.
Feb., 1860	57	married	several	left	?		before	39.6	40	1	1 +	6 mos.	soft	3	very fat	no record	
June 11, 1860	58	widow	?	left	1	consumptive relatives	before	44.4	45	1	10 mo.	2 mos.	soft	3, 9	fat, good health	affliction	
June 13, 1860	59	married	children	left	0		at	48.6	50	1	2.6	1	mixed	5	full, moderate health	no record	
1860	60	widow	?	both	0		at	49	50	1	2	1	hard	5	moderate health	no record	Skin of chest became completely covered with a "cuirass," both breasts hard and contracted.
1860	61	married	2	right	1		before	43	45	0	?	?	hard	5	good health	prolapsus uteri	Two years ago discovered small lump in left breast, which soon commenced to grow; is now as large as a hen's egg, and glands in axilla involved. No further record.
1860	62	married	children	?				?		2			hard	5	moderate health	blow	First operation July, 1856, 2d operation Oct., 1857. Died Mar. 3, '61.
Oct. 24, 1860	63	married	several	left	0		at	52	53	1	2	1	mixed	5	fat, good health		Recovered from operation after having erysipelas. Disease returned in axilla and internal organs, and died in 1 year after operation.
Nov., 1860	64	married	several	left	0		at	51.3	52	0	9 mos.		mixed	3	fleshy	blow	Died from internal cancer, at 52.
Dec. 3, 1860	65	single		right	0		before	?	40				hard	5	full, moderate health		Consultation. No further record. Operation advised.

Dec. 3, 1860	66	married	1	?	1		before	?	32				soft	3, 6	full, good health		Bad husband; high life; has been treated by compression; operation advised. Developed during lactation. No further record.
Dec. 3, 1860	67	married	0	right	1		before	40	43	0	?		hard	5	well developed, good health	never nursed	Consultation; advised no operation; skin ulcerated from a nodule. No further record.
Mar. 14, 1861	68	married	children	right	0		at	51.6	52	1	2	1.6	mixed	5	fat, moderate health		Lancinating pain, nipple not retracted, axilla became involved in 1 year. Consultation.
Mar. 16, 1861	69	married	several	right	0		at	51	52	2	3	2	scirrhocystic	4	full, good health	blow	Second operation Feb. 10, 1862. Died March 15, 1863.
Oct. 11, 1861	70	married	2	right	0	consumptive relatives	before	41.7	42	2	11 mo.	6 mos. after 1st	soft	3, 9	very full and strong	affliction	A very healthy woman at first, excitable nervous system; axillary glands involved at 2d operation.
Nov. 22, 1861	71	married	several	right	1	brother, cancer sup. maxilla	before	44.8	45	0	10 mo.	6 mos.	soft	3	very fat, fair	no record	Lives luxuriously; all of her family of great nervous excitability.
Feb. 1, 1862	72	widow	several	right	0		at	39.6	41	0	3.9		hard	3	moderate health	affliction	Nipple retracted. She was in an insane asylum 7 months. Menses stopped July, 1860. Felt in better health 1 year before death than for several years. Died Nov., 1863.
Apr., 1862	73	single		left	0		after	66.9	67	1		30 hrs.	hard	5	full, good health.	affliction	Phrenitis and delirium.
July 6, 1862	74	widow	several	left	0		after	69	74	0	5		scirrhocystic	4, 7	fat, good health	blow 3 yrs. before discovery	A daughter now has general cancer of skin; Nov., 1872.
July 30, 1862	75	married	several	both	1	mother & aunt died of cancer	before	?	40	0	?		hard	1, 8	full, good health	mammary abscess	Four years previous to date had called with small tumor. Exact date of commencement of malignant disease cannot be stated.
July 30, 1862	76	widow	0	right	1	sister died of cancer	before	41	43	2	2	3 mos. after 2d	hard	1	moderate health	affliction	Has had a tumor in breast since 16 years old. Amputated — returned in 4 months. Amputation repeated, and died in 3 months.
July 31, 1862	77	married	4	left	1	grandmother cancer of face	before	40.6	45	0	?		hard	1, 8	fat, good health	abscess with 1st child 15 yrs.	Developed 4½ years ago when 5 months pregnant.

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Aug. 11, 1862	78	married	several	right	0		?	49	55	0	10		hard	2	moderate health	no record	It cannot be stated when malignant development commenced. I have, however, estimated the duration as being 10 years.
Aug. 12, 1862	79	married	0	both	1		before	46	47	0	2		hard	1	full, good health	care and anxiety	Commenced as benign nine years ago; began to grow and give pain six months ago. Axillary glands now involved. I have estimated malignant growth to be of two years duration.
Sept. 1. 1862	80	married	several	right	0	sister cancer of breast	before	?	43	0	see R.		hard	1	fat, good health	mammary abscess, seat of cancer 12 yrs. ago	Sister has a similar breast, was married at 26 years. Had no children for 8 years, then she had 3. Further history not known.
Sept. 18, 1862	81	married	4	left	1		before	34.6	35	1	10 mo.	4 mos.	soft	3, 6	very fat, good health	did not nurse from left breast	Disease began 6 months after irritation of uterus, nipple retracted. Has bad ulceration of uterus several years.
Sept. 29, 1862	82	widow 18 yrs.	3	left	1	grandmother cancer of breast	after	58.6	60	0	2.6		mixed	5, 8	fat, good health	no record	Now rapidly developing. Died in 1 year.
Oct. 1, 1862	83	married. 11 yrs.	3	left	1 and neck		at	41.2	42	0	1.9	11 mo.	soft	3	full, good health	affliction	Menses ceased four months. Autopsy showed secondary development in liver, lungs, and other internal organs.
Oct. 3, 1862	84	widow 5 yrs.	3	both	1		after	63.6	68	0	6	1	hard	1	well developed, good health	blow at 18, followed by tumor at seat of cancer	Tumor gave trouble with first child. Did not nurse from the organ. Her husband died suddenly 6 years ago, and that interval is about the duration of the malignant growth.
Oct. 21. 1862	85	married	3	right	1		at	51	52	2			hard	2	full, good health		Amputation Oct. 1862, returned in cicatrix within one year. Second operation Sept. 1864, Feb. 1, 1865. Axillary gland much enlarged, also cervical of same side, but general health good.

Oct. 30, 1862	86	single		right	0	long lived	after	62.6	65	0	?		hard	5	moderate health		Not much pain: no retraction of nipple, no further record.
Nov. 1862	87	married	several	?	0	2 sisters of cancers	?	45.6	47	1	2.6	1	mixed	5	moderate health, nervous	no record	Two sisters died of cancer, but no trace of the disease in the line of ancestry.
Dec. 1862	88	married	8	right	0		before	45	48	0	?		hard	5	full, good health	imperfect breast	Nipple began to retract 3 years ago. Menses regular, not much pain, no further record.
Jan. 1863	89	married	0	right	1	mother cancer of breast	before	39	41	1	4	2	hard	5, 8	full, good health	no record	Married 21 years, never pregnant, Feb. 27, 1863. Disease has returned in small patches: otherwise in good health. Died Jan. 1865.
Jan. 1863	90	married	2	both	0	sister of cancer	after	?	60	0	?		hard	1	full	no record	Benign tumor 12 years. Grew rapidly 18 mos. before death, July 1863. Duration of malignant growth cannot be exactly stated. Consultation.
Apr. 21, 1863	91	widow	6	right	0		after	69	72	0	3		hard	1	full, good health	abscess in both breasts, and tumor 29 years.	Consultation, advised to leave alone, no further history.
Apr. 1863	92	married	2	left	0	mother, aunt, cancer of breast	before	?	33	1	16	16	scirrhocystic	4,6,8	full, good health		Cysts with grumous dark fluid. "Cancer cells" outside of cysts. Is now living (1879).
May 2, 1863	93	single		right	1	mother consumptive	before	35	37	2	9	7	hard	2, 9	full, good health	blow in 1854 followed by tumor which became hard in two years.	Amputation Nov. 12, 1859; 2d operation Nov. 5, 1863. Axillary glands had then become involved. Died in fall of 1865, about 9 years after commencement, and 7 years after 1st operation.
May 5, 1863	94	widow	6	left	0		after	70	75	0	7		scirrhocystic	4, 7	full, good health	blow about 5 years ago	
May 5, 1863	95	married	several	left	1		at	51.6	53	0	2		mixed	5	thin	no record	Symptoms of cancer of stomach. Died in 6 months of general cancer.
May 15, 1863	96	married	0	right	0		before	41	43		?	?	hard	1	full, good health	no record	Apparently benign tumor several years, never pregnant. No further record. Had displacement of uterus. Ablation advised.

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May 19, 1863	97	married	0	right	0	phthisis	before	33	35	1	6	4	hard	5,6,9	fat, good health	no record	Feb. 28, 1866, no return, but much pain in arm. Disease returned and patient died, May, 1867.
June 2, 1863	98	married	8	left	1		before	31.6	33	0	?		hard	5,6	fat, good health	no record	Now nursing. Married in her 15th year.
June 2, 1863	99	married	1	left	1		at	50	53	0	3		hard	5	fat, good health	affliction	
June 3, 1852	100	married	2	left	0		at	53.6	55	2	8	6.6	hard	1	delicate	no record	Discovered lump in 1842, commenced to give trouble in 1845. Amputation in 1846, in Aberdeen, Scotland. Reappeared in 1 year but did not give much trouble till Feb. 1849, when a mass as large as a goose-egg was removed. No axillary glands involved at that time. Healed in 3 wks., and for 18 mos. remained stationary, but with pain. It then, Oct. 1851, ulcerated; axillary glands involved, Sept. 1852. Died in spring of 1853.
Jan. 5, 1863	101	married	1	left	1		before	31.6	33	0	?		hard	1,6	full, good health	affliction	Has had a tumor in left breast last 8 years, which remained nearly stationary till the last 18 months. No further record.
Jan. 27, 1863	102	married	2	left	1		after	51.6	54	0	?		hard	5	full, good health	affliction	Menses ceased 18 months before development, prognosis slowly fatal. Operation not advised. Consultation. Skin and axilla involved.
July 1, 1863	103	married	2	right	1		before	32	33	1		?	mixed	1,3,6	fat, good health	blow, chronic disease of uterus	Skin involved and adherent during last year. Saw it 1 year ago. Tumor had existed some 4 years, apparently benign. Operation July 23, 1863. Recovered from operation. No further record.

July 8, 1863	104	married	several	right	0	phthisis	at	46	50	0	?	?	scirrhous cystic	4, 9		no record	Tumor, four years' standing, as large as a walnut, and contains fluid. No further record.
July, 1863	105	married	0	left	1		at	51	53	0	2.10		hard	5	fat, good health	blow 2 yrs. ago soon followed by tumor	Axillary glands much involved. Menses stopped 1 year ago. Tumor now ulcerated. Iodine has been applied, which caused irritation.
July 16, 1863	106	married	7	left	0		before	42	43	0	17		hard	2	full, good health	no record	Nipple retracted, tumor hard, lancinating pain, at times severe, menses regular, advised soothing treatment. Breast atrophied, is now living and well (1879.)
July 22, 1863	107	single		left	0		before	44	45	0	?	?	hard	1	good health	blow 10 yrs. ago, tumor since	Tumor began growing one year ago; no retraction of nipple. When the tumor became cancerous cannot be definitely stated. No further record.
July, 1863	108	married	several	left	0		before	44	46	0	2.7		hard	5	good health	never nursed well, and not any for last 20 years	Consultation.
Jan. 13, 1864	109	married	0	right	0	phthisis	before	43	45	1	3	1	hard	5	full		Tumor adherent to pectoralis major over 2 square inches.
Feb. 8, 1864	110	married	4	right	0	phthisis	before	43.6	46	1	?	?	hard	5	fat, good health	weaned child in 1859	Disease returned in 16 months. No further record.
Feb. 9, 1864	111	married	3	left	1		before	33.4	34	0	1.2		mixed	3, 6	fat, good health	no record	Skin full of nodules. Mother died of dropsy at 46.
Feb. 10, 1864	112	single		left	0		before	?	40	1	?	30 hours	mixed	5	full, good health	blow 5 mos. ago	Died in 30 hours after operation.
Feb. 22, 1864	113	married	3	both	0	mother cancer of uterus	before	31.9	32	1	1.6	1.3	soft	3,6,8	very full, good health	affliction and great anxiety.	Returned in left breast in October and became general. Surgeon had not removed the whole gland. Died May 25, 1865. Consultation.
Feb., 1864	114	single		right	1		after	?	60	0	?		hard	2	full, good health	affliction	Has probably existed two years, but cannot state definitely. Advised to leave alone.

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Mar., 1864	115	single		left	1		before	46	47	0	1.2		mixed	1	full, good health	injury to breast	Whole breast infiltrated; ulcerated; axillary glands much enlarged. Died in 3 months. Tumor discovered 7 years ago. Has grown rapidly during the last year. Duration of malignant growth cannot be stated.
Apr. 22, 1864	116	married	children	left	0	cancer	after	56	62	0	6		hard	2, 8	moderate health	no record	The disease progressed steadily from the commencement, and caused much exhaustion from ulceration. Axillary glands only became involved near termination.
June 18, 1864	117	single		right	1 and skin		before	41.8	42	1	1.4	1	hard	5	full, moderate health	blow, Oct., 1863, affliction	December 30, 1864, disease returned in skin, and patient died in 6 months.
Jan. 20, 1864	118	married	several	left	1		at	45	46	1	?	?	hard	5	full, good health	abscess with youngest child	Was living one year after operation; no further record.
Jan. 30, 1864	119	married	5	right	1		after	61	65	0	?		scirrhocystic	4	moderate health	no record	No further history.
July 6, 1864	120	widow	4	right	0	mother had cancer	after	57.8	58	0	?	?	hard	5, 8	well-developed, good health	never nursed in right breast	Menses ceased 7½ years ago. Operation advised, no further record.
Sept., 1864	121	married	several	left	1		before	42	43.7	2	3	9 mos. after one	mixed	5	very fleshy	no record	1st operation May, 1863. 2d do. Oct., 1863. Duration about 3 years.
Oct. 5, 1864	122	married	several	left	0		before	37.6	39	1	?	?	hard	5	full, good health	breast pump	Amputation Feb. 9, 1865. Was well Oct. 24, 1866. Consultation, no further record.
Oct. 5, 1864	123	married	several	right	1, at 2d		after	54	55	2	7.5	6.5	hard	2	now feeble	no record	First operation one year after commencement: second do. 5 years after first. Duration about 7½ years.

Oct. 31, 1864	124	married	several	right	1		at	50.10	52.6	1	6.11	5.3	hard	2	full, at first	affliction	Amputation Dec. 20. 1864. Removed axillary glands with whole breast. Saw patient Dec. 28, 1869. Commenced to return about 6 months before. Very severe domestic trouble.
Oct. 31, 1864	125	married	0	right	1		before	42	44	0	3.1		hard	5	full, good health	no record	
Oct. 31, 1864	126	married	2	left	1	cousin had cancer	at	51.8	52	0	8 mos.		soft	3	very fat, good health	pressure of stays	Died Feb. 11, 1865. Duration about 8 months.
Nov. 23, 1864	127	married	6	left	1		before	42.6	43	1	1.8	1.2	mixed	5	full, good health	no record	Removed whole breast and axillary glands.
Dec. 29, 1864	128	single		right	1		at	44	45	0	?		hard	5	full, good health	blow 15 mos. ago	No further record.
Jan. 6, 1865	129	married	0	left	1	uncle and brother, maternal uncle, cancer	before	26.6	28	0	2.6+		hard	5,6,8	fat	blow 1¼ yrs. ago	Tumor developed immediately after blow.
Jan. 12, 1865	130	widow	5	left	0		before	?	42	1	living		hard	1	fat, dark	abscess, great affliction	This lady nursed only 2 of her children. Consultation. Is living and well, Feb., 1879.
Jan. 12, 1865	131	married	0	left	1	paternal aunt, cancer	before	37	41	0	?		hard	1, 8	good health	blow 7 yrs. ago	Blow immediately followed by hard lump. Began to grow faster three years after blow, four years ago, which alarmed her, and she consulted a cancer doctor, who applied caustic in Feb., 1862. Disease progressed, and axillary gland soon became involved. No further record.
Jan. 13, 1865	132	married	5	left	1	mother, cancer; father, phthisis	before	34	38	2	6.8	2.8	hard	1,8,9	full, good health	affliction	First amputation, Jan. 13. 1865. 2d amputation, Sept. 1866. Died Sept. 1867; was a daughter of No. 54. At the 1st operation a few ganglia were removed from the axillary developed in seat of benign tumor. Commencement of malignant growth cannot be determined. In May, 1867, a small knot was removed from a part above the cicatrix.

Date.	Number.	Civil Condition.	No. of Children.	Breast involved.	Axilla involved.	Family History.	Manifestation of Disease before or after Menopause.	Age at Commencement.	Age at Operation or Observation.	No. of Operations.	Duration of Disease.	Lived after Operation.	Variety of Cancer.	Group.	Physical Condition.	Assigned Exciting Cause.	General Remarks.
Jan. 20, 1865	133	married	5	left	1		before	43.10	46	2*	4.6	2.4	hard	1		blow, followed immediately by benign tumor	After consulting me the patient went to a "cancer doctor," who applied a caustic plaster in March, 1865, and again in April, 1867. The disease then progressed rapidly, and she died. Tumor quiescent for about 8 years.
Feb. 6, 1865	134	married	1	?	0		at	47	48	0	?		scirrhocystic	4		4 miscarriages, blow, abscess	No further record.
Feb. 13, 1865	135	married	children	left	1, at 2d		at	47	49	3	5	3	hard	1	good health	abscess at 45 years	Tumor quiescent 2 years.
Mar. 8, 1865	136	married	several	left	1	mother, cancer of uterus	after	57.9	58	1	10 mo.	7 m.	hard	3, 8	fleshy	no record	Nipple retracted.
Mar. 15, 1865	137	married	0	left	0		before	50	53	0	6.6		hard	1	thin, dark	no record	Had benign tumor several years, began to increase in 1862. Duration of cancerous growth about 6½ years.
Apr. 12, 1865	138	widow	children	left	0		after	68.6	70	0	?		scirrhocystic	4, 7	large and fat, good health	blow, Nov., 1863; subsequent injury, Feb., 1865	The development became rapid from the time she received the second injury. No further history.
Apr. 29, 1865	139	married	1	right	1	grandmother, cancer of breast	before	38	42	0	5		hard	5, 8	full, good health	affliction	Advised no operation, on account of state of mind and axillary involvement. Patient a cousin of No. 37. Died in 1 year.
May 24, 1865	140	widow	4	left	0		after	57.10	58	1	1.2	1	soft	3	very fine, good health	no record	Died July 8, 1866, of general cancer.
July 28, 1865	141	married	4	right	1		before	36.6	38	0	?		hard	5	had had fine health	always nursed badly from right breast	Sept. 29, health better, but disease advanced. Dec. 30, breast the same, but lymphatics enlarging. No further record.

Aug. 3, 1865	142	married	5	right	1		after	55	57	1	3.4	1.4	hard	1	full, good health	abscess many years ago	Menses ceased at 54. Cancerous development about 3½ years.
Aug. 26, 1865	143	single		right	0		at	47.8	50.2	1	7.10	5.4	hard	2	full, good health	blow	Heard from Feb. 22, 1871. Has been well since operation, Oct. 5, 1865.
Sept. 25, 1865	144	married	0	left	0		before	39.4	40		?		hard	5			Menses irregular, sister died with ovarian disease. This patient took a bad "cold" in January last, and tumor commenced. Has had eczema. No further record.
Sept. 26, 1865	145	married	several	left	0	grandmother had cancer	before	42	44		?		hard	5, 8	full, good health	blow	Tubercles in skin, tumor ulcerated, has had psoriasis.
Oct. 10, 1865	146	married	3	left	0		at	47.3	48	0	?		hard	5	very fine physique	inflammation in right breast	Long-lived family. General health rather better than usual since discovery of tumor.
Oct. 14, 1865	147	single		right	0	mother, cancer of uterus	at	48.7	49	2			hard	5, 8		no record	First operation Dec. 6, 1864. 2d operation June 17, 1865. No further record.
Nov. 11, 1865	148	married	3	right	0		before	40.6	42	0	1.7		mixed	3	very fat	no record	
Nov. 18, 1865	149	married	several	right	0		after	57	60	1	3.10	10 m.	hard	5	large, good health, fat	blow	Began to develop progressively immediately after blow.
Dec. 19, 1865	150	married	several	right	0		after	54.6	55	3		?	hard	5	fat	no record	Commenced Oct. 1864: amputation April, 1865: gland not all removed. 2d operation, fall of 1865: 3d operation, Jan. 1866. No further record.
Jan. 8, 1866	151	single		right	0		before	31.11	33	1	2.5	1.4	mixed	5	full	no record	Commenced Mar. 1864: amputation April 17, 1865. Return of disease in axilla and neck, Jan. 1866. Died Aug. 1866.
Jan. 15, 1866	152	married	several	right	1		before	47	49	1	2.9	9 mos.	hard	5	full, moderate health	no record	Tumor exceedingly hard; lancinating pain.
Jan. 15, 1866	153	married	0	right	0		before	46	48	1	6	4	hard	2	well developed, good health	no record	Recovered from operation and was well 4 years after. No further record.

* Two applications of caustic.

Date.	Number.	Civil Condition.	No. of Children.	Breast involved.	Axilla involved.	Family History.	Manifestation of disease before or after Menopause.	Age at Commencement.	Age at Operation or Observation.	No. of Operations.	Duration of Disease.	Lived after Operation.	Variety of Cancer.	Group.	Physical Condition.	Assigned Exciting Cause.	General Remarks.
Jan. 24, 1866	154	married	3	right	0		after	?	51	*			hard	5	?		Had arsenical plaster applied, died of arsenical poisoning. Menses stopped 5 years ago. Nipple now retracted.
Feb. 28, 1866	155	married	7	right	0	mother had cancer	at	47	50	0	3		hard	1, 8	fat, good health	blow, affliction,	Tumor quiescent for 7 years. Began to develop more rapidly 3 years before death.
Feb. 28, 1866	156	married	1	right	1		after	58	60	1	3 3	1.3	hard	5	full, good health	no record	
Mar. 3, 1866	157	widow	7	right	0		after	79	80	0	?		hard	5, 7	good health	no record	Tumor in a state of ulceration, size of a walnut. Advised to leave it alone. No further history.
Mar. 26, 1866	158	married	6	left	0	great uncle, cancer of face	before	38.8	39	1	1	4 mos.	soft	3, 8	fat, good health	no record	Amputation Oct. 20, 1865. Returned in axillary glands in 2 mos., and died in 1 year from commencement, 8 months after operation renewal of cancer.
Mar. 28, 1866	159	married	8	left	1		before	42	44	0			soft	5	well developed,		Commenced when weaning last child, no retraction of nipple. Consultation, no further history.
Mar. 31, 1866	160	widow	1	right	0		before	32	35	1	3	2	hard	5, 6	full, good health	affliction	Recovered and was well 2 years after operation, no further record.
Apr. 22, 1866	161	married	4	left	0		at	47	48	1	14	13	hard	2	full; good health	no record	Was well Feb. 1879.
May 1, 1866	162	widow	several	left	1	maternal aunt, cancer at 68 yrs.	before	35	37	0	4		hard	5, 6, 8	fat	affliction	
June 1, 1866	163	widow	2	left	1		after	59.6	61	0	?		hard	5	well developed, good health	no record	April 10, 1867, increasing slowly, health good. No further record.

July 27, 1866	164	married	2	left	1		before	43.6	46	*	?		hard	5	full, good health	abscess	Loss of muscular power in right arm and leg, severe pain in neck in right side, tumor partially removed by caustic a few months previous. No further history.
Oct. 20, 1866	165	married	0	right	1		at	50.6	59.8	1	1.6	4 mos.	mixed	5			
Mar. 20, 1867	166	married	several	left	0		after	57.9	58	1	1	9 mos.	hard	1	fleshy, good health	abscess, affliction	Mammary abscess about 15 years ago, which was opened. Gland recovered, and has since nursed from it, but a small hard lump remained. Malignant growth commenced about March, 1867. Amputation Apr. 11, 1867. Wound healed May 7, and patient apparently doing well. Sailed for Europe May 29. Disease soon returned in cicatrix and patient died Jan. 13, 1868.
Apr. 12, 1867	167	married	4	right	0		before	38	40	1	3.6	1.6	mixed	5	very fat, good health	no record	
Apr. 14, 1867	168	married	2	right	0	father, cancer of rectum	before	36.6	37	1	2.1	1.7	mixed	5, 8	full, good health	affliction	Amputation Apr. 29, 1867. May 31, doing well. Sept. 23d called and wound all healed, but hardness in axilla. March 27, 1868, returned in cicatrix, and glands in axilla increased in size. Died Sept. 1868.
Apr. 15, 1867	169	widow	0	right	1		before	49	52	1	4	1	soft	5	full, good health	affliction	Dysmenorrhœa, and irregular menses, during which breast swelled a good deal. Sailed for Europe May 18, 1867. Was operated on in Paris Sept. 16, 1867. Returned from Europe Oct. 24, disease returned, died May, 1868.
May 7, 1867	170	married	several	right	0		before	43	45	1	?		hard	5		affliction	Consultation. Nipple retracted, little pain; recovered from operation. No further record.
May 28, 1867	171	widow	10	left	1		before	46	46.8	1	11 mos	3 mos	soft	3	fat, good health	affliction	Family long-lived, mother 80, maternal aunt 98. Disease returned in cicatrix and lungs, and patient died in 3 months after operation.
June 19, 1867	172	single		left	0		before	32	32.4	1	?	?	hard	3, 6	thin	affliction	Amputation. Recovery. Wound healed kindly. No further record.

* Caustic.

Date.	Number.	Civil Condition.	No. of Children.	Breast involved.	Axilla involved.	Family History.	Manifestation of Disease before or after Menopause.	Age at Commencement.	Age at Operation or Observation.	No. of Operations.	Duration of Disease.	Lived after Operation.	Variety of Cancer.	Group.	Physical Condition.	Assigned Exciting Cause.	General Remarks.
July 12, 1867	173	widow	2	right	1		after	59	60	0	3.6		hard	5	good health		Has prolapsus uteri.
Aug. 13, 1867	174	married	0	left	1	grandmother, cancer	before	34	35	1	1.6	6 mos.	soft	3,6,8	full, good health	affliction	No retraction of nipple.
Aug. 24, 1867	175	married	1	right	1		after	55.7	56	0	11 mos	6 mos.	soft	3	very fat, good health	affliction	
Aug. 31, 1867	176	widow	0	right	0	mother, cancer of uterus	before	49	50	1	3.6	35	hard	2, 8	well developed, good health	blow, affliction	Amputated in 1834. Disease returned Aug. 1867. Advised to leave alone. Died in 1870 of cancer, at 86 years.
Sept. 17, 1867	177	married	1	right	1	great grandmother, cancer of breast	before	37.6	40	0	?		hard	5, 8	well developed	no milk in right breast	Left breast secreted milk for 2 years. No further record.
Sept. 25, 1867	178	married	2	left	0		before	37	40	1	4	1	mixed	5	fat	blow, Jan. 3, 1865	Eczematous eruption and serous discharge about the nipple. Commenced to grow rapidly 2 years after blow. Amputation Jan. 29, 1868. June, 1868, doing well. Died Jan. 20, 1869.
Sept. 25, 1867	179	married	12	left	1		after	65	66	0	1.6		soft	3	fat, good health	abscess	Whole gland infiltrated and growing rapidly.
Sept. 25, 1867	180	widow	3	left	0		before	41	42	0	?		hard	5	fat	affliction	Maternal grandmother, eczema. No further record.
Sept. 30, 1867	181	married	3	left	1		before	34	36	0	3		hard	5, 6	now thin	affliction	
Oct. 9, 1867	182	married	4	right	0		before	45.2	46	1	7.7	6.8	hard	2	fleshy, good health, nervous		Ulceration of uterus. Died of general dropsy Jan. 1875. Cause not stated. Had recovered apparently from disease.

Nov. 1, 1867	183	married	5	left	1		?	?	48	0			hard	5	well developed, good health	supposed metastasis from cancer of uterus	Seven years ago had an induration of cervix uteri and fetid discharge, which was pronounced cancerous. Actual cautery was applied six times. The uterine trouble ceased about 10 months ago, and a tumor appeared in left breast, which was increasing in May last. Died in autumn of 1869.
Dec. 1, 1867	184	married	?	?			after	?	68				hard	5		no record	
Dec. 27, 1867	185	married	12	left	1			?	52.8	1			hard	5		blow 4 years ago	Breast removed 16 months ago. Recovered from operation, but hard masses are now forming beneath the skin. Has now been confined to bed about 4 months. Consultation.
Jan., 1868	186	married	several	left	0	phthisis	before	38	40	1	10	8	hard	2, 9	well developed, good health	affliction	Brother and sister had cancer.
Jan. 25, 1868	187	married	children	right	0	father, mother, and sister, phthisis	after	66.8	68	0	?		hard	5, 9		no record	Menses ceased at 59. No further record.
Jan. 25, 1868	188	single		left	0		before	39.5	40	1	?		hard	5	full, good health	blow	Nipple retracted. No further history.
Mar. 4, 1868	189	widow	several	left	1		at	47.10	48	0	1	10 mo.	soft	3	fat	affliction	
Apr. 1, 1868	190	married	0	left	0		before	?	41	1	?		?	1	full, good health	inflammation	Amputation Oct. 1865, in Boston.
Apr. 29, 1868	191	married	several	right	1		before	42.10	43	1	13 mo.	11 mo.	soft	3	fat, good health	abscess	Nipple retracted.
May 3, 1868	192	married	1	left	1		at	47.11	49	0	1.11		mixed	5		blow, 15 months ago	Two months after blow, tumor commenced to grow, followed by retraction of nipple. Axillary glands became involved 6 months ago. Tumor now ulcerated. Died in 10 months.
May 3, 1868	193	married	?	left	1	phthisis		?	46				hard	5			
May 3, 1868	194	married	1	left	1		after	53	56	0	4		hard	5	fat		

Date.	Number.	Civil Condition.	No. of Children.	Breast involved.	Axilla involved.	Family History.	Manifestation of Disease before or after Menopause.	Age at Commencement.	Age at Operation or Observation.	No. of Operations.	Duration of Disease.	Lived after Operation.	Variety of Cancer.	Group.	Physical Condition.	Assigned Exciting Cause.	General Remarks.
May 25, 1868	195	married	0	left	0		before	40.4	41	0	1.9		mixed	3	fat, good health	blow	Tumor hard, lancinating pain. During winter, axilla became involved. Disease progressed, and patient died July 2, 1869.
June 2, 1868	196	married	several	right	1		before	44.2	44.8	1	1.1	7 mos.	soft	3	full, good health	blow	
June 10, 1868	197	widow	1	right	1	mother, cancer uterus; uncle, cancer stomach	at	50	55	0	6		hard	1, 8		affliction	
June 17, 1868	198	married	several	right	0		before	34.6	35	0	1		soft	3, 6	fat, good health	affliction	
July 7, 1868	199	single		right	0	father had phthisis; sister, cancer	at	49.7	50	1	1	7 mos.	soft	3, 9	fat, good health	no record	Sept. 16, 1868, tumor has increased. Now operated on; wound healed, but disease returned in lungs and other internal organs. Sister died of cancer.
Aug. 15, 1868	200	single		right	0		before	39	40	3	11	10	hard	1	well developed, good health	dysmenorrhœa and lump at 20	Lump formed in breast at 20, was painful, and developed into a cancer. Benign tumor 19 years.
Aug. 27, 1868	201	married	0	right	0		after	59	60	2	5.6	4.6	soft	2	fat, good health	blow	Married late. First operation, May 28, 1869; 2d do. Apr. 5, 1870. Jan. 1873, feels well, but cicatrix rather hard. Disease returned and patient died Nov. 1873.
Oct. 27, 1868	202	married	1	right		phthisis	before	41	44	0			hard	1, 9	well developed, good health	inflammation 13 years ago, uterine irritation	Commenced 3 years ago in masses. Benign 10 years. No further record.
Nov. 7, 1868	203	married	4	left	0		before	43.6	46				hard	5	good health	abscess	Father had psoriasis, and sister said to have the same. No further record.

Nov. 7, 1868	204	widow	several	left	1		before	37	42	0	7.6		hard	2	fat, good health	abscess of both breasts, had caustic applied, and much care	Had had a small lump in left breast for 5 years, which has been painful, and the probable duration is over 7 years.
Nov. 10, 1868	205	widow	several	left	0		at	47	49	1	11	9	hard	2		blow, affliction	Two years after operation axillary glands became enlarged, grew rapidly, arm swelled and painful in 1 year.
Nov. 14, 1868	206	single	0	right	1		before	27.2	28	0	?		hard	5, 6		affliction	Consultation. No further record.
Dec. 8, 1868	207	married	0	left	1		before	32	33	0	?		hard	5, 6	fat, good health	affliction	Tumor very hard: no retraction of nipple. Jan. 27, 1869, continues to increase. No further record.
Feb. 11, 1868	208	married	0	left	1		before	40.3	42	0	3		hard	5	full, good health	no record	
Feb. 11, 1869	209	married	8	right			after	54.5	55	1	1.3	8 mos.	soft	3	full, good health	abscess with youngest child	
Feb. 20, 1869	210	married	4	left	1	phthisis	at	45.5	46	0	?		hard	5, 9	delicate		Had pulmonary hæmorrhage a year ago. Menstruates eight to ten days, and breasts enlarge; tumor very hard. No further record.
Feb. 22, 1869	211	married	?	right	0		before	48.6	52	0	?		hard	5		affliction	Consultation, now ulcerated. No further record.
Mar. 1, 1869	212	married	2	right	0		before	39.10	40	1	1.2	1	soft	3	fat	blow, May, 1868	Saw her in February, 1869. Operation, March 22, 1869. April 1, 1869, doing well. Disease soon returned, progressed very rapidly, died Feb., 1870, of general cancer.
Mar. 5, 1869	213	married	3	left	0	mother, cancer of stomach	at	47 +	49	1	2.6	6 mos.	mixed	5, 8	delicate, was strong	affliction	Died of general cancer.
Apr. 10, 1869	214	married	3	left	1		at	50	51	1	2.5	1.5	mixed	5	well developed, good health	blow, followed in 1 year by tumor	April 7, 1870. Continues well after good recovery. June 8, 1870, disease returned, died Sept. 1870.
Apr. 17, 1869	215	widow	3	right	1	phthisis	after	62	63	0	1.8		mixed	5, 9	fat	affliction	Ganglia in axilla and neck much enlarged. June 29, 1869, much worse.
May 10, 1869	216	married	0	right	1	maternal grandmother had cancer	after	56.6	57	1	2.8	2.2	mixed	5, 8	well developed, good health	no record	Disease returned in breast and ganglia. Died of general cancer.

Date.	Number.	Civil Condition.	No. of Children.	Breast involved.	Axilla involved.	Family History.	Manifestation of Disease before or after Menopause.	Age at Commencement.	Age at Operation or Observation.	No. of Operations.	Duration of Disease.	Lived after Operation.	Variety of Cancer.	Group.	Physical Condition.	Assigned Exciting Cause.	General Remarks.
June 10, 1869	217	married	1	left	0		after	49.7	50	0			hard	5		blow 11 years ago	Menses ceased 10 years ago.
June 11, 1869	218	single		left	0	phthisis	before	?	42	*			hard	5, 9	delicate	injury to breast 2 years ago	Skin adherent. Had a knot removed by arsenical plaster and poultices, no operation. No further record.
June 29, 1869	219	married	1	left	0	mother and brother phthisical	before	42.10	44	0	?		hard	5, 9	full, good health	no record	Now growing rapidly. No further record.
Sept. 9, 1869	220	married	1	left	0	phthisis	at	48	51	1	3.6	6 mos.	hard	5, 9		no record	Had no children for 18 years after marriage. Recovered from operation, but disease returned in axilla and she died in 6 months of general cancer.
Oct. 1, 1869	221	married	11	left	1	phthisis	after	53	55	0	3.6		hard	5, 9	fat	affliction	Nipple always retracted.
Oct. 8, 1869	222	single		left	0		at	50	54	1	13 =	9 =	hard	2	well developed	no record	Change of life 4 years ago and nipple then became retracted. Amputation Jan. 7, 1870; entire gland, which was completely infiltrated, removed. Recovered, and was well, in March, 1879.
Oct. 20, 1869	223	married	3	right	0	grandmother and sister, cancer	at	47.7	48	0	?		hard	5, 8		never nursed from right breast	
Nov. 11, 1869	224	married	several	right	0	phthisis	before	34.6	35	0	?		hard	5, 9	fat		Had miscarriage 4 years ago, when 2½ months pregnant. Tumor discovered 6 months ago. Now size of hen's egg. Mother had 12 children, 4 died of consumption. Consultation. No further record.

Nov. 29, 1869	225	widow	2	right	0	phthisis	after	53	57	0	?		hard	5, 9	delicate	injury by stays	No further record.
Dec. 13, 1869	226	married	8	left	0	paternal aunt, cancer of breast	after	54.7	57	1	3.1	8 mos.	hard	5, 8		no record	
Dec. 14, 1869	227	widow	several	right	0		at	47	51	1	5	1	hard	1	delicate	blow 12 years ago followed by lump	Benign tumor 7 years' duration, of malignant growth about 5 years.
Dec. 16, 1869	228	married	several	left	0		before	47.4	48	0	?		hard	5	good health	blow 1 year ago	Consultation. No further record.
Dec. 20, 1869	229	married	3	right	0		before	46.6	48	0			?	5		blow 3½ years ago	Consultation. No further record.
Dec. 20, 1869	230	married	5	left	0	maternal grand aunt, cancer; maternal aunt, lupus	at	48	49	0	3.3		hard	2, 8		caustic	Benign tumor 4 years. Malignant 3¼ years.
Dec. 27, 1869	231	married	4	left	1	aunt, cancer	before	41.5	42	0	?		hard	5, 8		affliction	Was treated by compression; made worse. No further record.
Dec. 28, 1869	232	widow	0	right	1		at	47	48	0	?		hard	5		affliction	Consultation. No further record.
Mar. 11, 1870	233	married	several	right	0	aunt and sister, cancer	after	52.6	54	0	?		hard	5, 8		no record	Consultation. No further record.
Mar. 24, 1870	234	married	0	left	0	phthisis	after	53.3	54				?	5, 9	well developed, moderate health	affliction	Breast fully infiltrated, arm painful, consultation. No further record.
Apr. 1, 1870	235	widow	1	left	0		after	60.10	63	1	3.2	1	hard	1	fat, good health	benign tumor 20 years	Consulted me 22 years ago with a small tumor, at the age of 41, before cessation of menses. About 26 months ago the lump began to develop rapidly. Amputation as per date. Disease returned in cicatrix and axilla, and she died in one year.
Oct. 19, 1870	236	married	4	left	0	phthisis	before	34.6	37	1	4	1	hard	1, 6, 9	well developed, good health	no record	Benign tumor 4 years; malignant growth 4 years.
Nov. 18, 1870	237	married	several	left	1		before	46	48	0	3.3		hard	5	fat	no record	Father 90, mother 80 years old.

* Caustic

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Dec. 17, 1870	238	married	0	left	1		before	37.8	38	0	1.2		soft	3	fat, strong	no record	Breast fully infiltrated, nipple retracted, growing rapidly, hard knots in skin. Died in 6 months after observation. 14 months' duration.
Dec. 24, 1870	239	married	several	right	0		at	48	50	1	2.5	7 mos.	hard	5	now thin	pressure of stays	
Jan. 12, 1871	240	married	1	both	0		before	42	43	1	8	7	hard	2	full	pressure of stays	Gland much indurated, nipple retracted. During 1876 the disease returned in right breast, and in 1877 in left breast. In February, 1878, axillary glands and skin involved; left breast contracted. General health good, except dyspepsia. Attends to active duty (actress), but disease steadily progressing. Died in June, 1878.
Feb. 1, 1871	241	married	0	left	1		before	45.3	46	0	1.3	6 mos.	soft	3	full, good health	no record	Tubercles in skin, used cundurango. Consultation.
May 11, 1871	242	married	4	left	1		at	46	50	0	6 +		hard	5			
June 27, 1871	243	married	10	right	0		at	?	57	0			hard	1		affliction	Whole duration of tumor about 7 years, but time of malignant development cannot be exactly stated; probably over 5 years.
Sept. 27, 1871	244	married	1	right	0	father and two sisters, phthisis	at	44	45	0			hard	5, 9		affliction	Has had eczema. Consultation. No further record.
Dec. 10, 1871	245	married	1	left	0		after	59	61	2	3.6	1.6	hard	5	delicate	affliction	Menses ceased at 47. Second operation Dec., 1872. Disease returned Feb., 1873; much infiltration around cicatrix. Axillary glands and lymphatic system now much involved. Died of general cancer, June, 1873.

May 5, 1872	246	married	1	left	1		before	32	33	0	1.3		soft	3, 6	fat, good health	no record	Ulcer for 3 weeks.
May 7, 1872	247	widow	0	left	1	phthisis	before	37	38	1	1.6	6 mos.	soft	3, 9	fat, good health	no record	Returned in cicatrix after healing, in one month, and developed rapidly in system. Died of general cancer in 6 months.
May 22, 1872	248	married	several	left	1		at	49	50	0	?		hard	5	fat, strong,	no record	Developing rapidly; pain sharp and lancinating. Ganglia along pectoral enlarged. Has had rheumatic gout. No further record.
May 29, 1372	249	single		right	0		at	51	52	0	4		hard	5	thin, good health	no record	
Aug. 7, 1872	250	married	2	left	1	consumption on both sides	before	35.5	36	0	1.2		soft	3, 6, 9	fat, good health	pressure of stays	This lady was living luxuriously. Outer half of breast infiltrated. Disease developed rapidly, and she died of general cancer.
Aug. 14, 1872	251	single		right	1		before	44	45	0	?		hard	5	full, good health		Had been treated by compression, which aggravated the disease. No further record.
Aug. 28, 1872	252	widow	3	left	1	father consumptive	at	47	49	0	2.5		hard	5, 9	full, good health	blow, affliction	Died of cancer of lungs, liver, and other internal organs.
Oct. 4, 1872	253	widow	6	right	0	mother, cancer of uterus	before	39.8	40	1*	2.7	1.10	hard	5, 8	full, moderate health	caustics	Had recently been operated on by a "cancer doctor;" the disease was developing rapidly, severe lancinating pain. Recovered from wound, which healed kindly, but disease soon returned in lymphatic system and internal organs, and patient died in one year and ten months after operation.
Nov. 1, 1872	254	married	several	left	0		before	39	45	3	6.6	4.6	hard	2	over-fat and strong	no record	Disease returned in cicatrix and axilla after 1st operation. 2d operation in one year after. Disease reappeared in axilla; 3d operation six months after. Arm became swollen soon after; whole system affected; but patient survived more than one year after last operation.
Nov. 20, 1872	255	single		left	1	mother, cancer of uterus; sister, phthisis	at	48.4	50	0	1.9		hard	5, 8, 9	full, good health	affliction	Tubercles in skin, developing rapidly. Has much cough and expectoration. Died Dec., 1872, of general cancer; lungs and other internal organs involved. Consultation.

* Caustic.

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Dec. 6, 1872	256	married	0	left	0		before	41	43	0	?		hard	5	fat, very strong		Scanty menses, and tumor painful at periods, and during change of weather. Father died young with dropsy. Mother weighed 250 lbs. while bearing children; consultation. No further record.
Dec. 12, 1872	257	widow	2	left	0	phthisis	before	40.2	45	*	4.10		hard	5	full	caustic	Had used cundurango, arsenic, and conium.
Jan. 14, 1873	258	married	0	right	1	phthisis	before	37	39	0	2		mixed	5, 9		no record	
Jan. 16, 1873	259	married	5	left	0		before	44	47	1	living		scirrhous	4	fine physique	caustic 2 years ago	Case of cysto-scirrhus; bleeds from nipple. Is now (April, 1875) living and well.
Jan. 16, 1873	260	married	4	left	0		at	47	51	*	12 +		hard	2		caustic	Consulted me 8 years ago. Benign at that time, 4 years after went to "cancer doctor" and was treated with arsenical plaster. Tumor now increasing. No further record.
Jan. 20, 1873	261	married	8	left	1	phthisis	at	50	51	0	?		hard	5		affliction	No further record.
	262	widow	several	left	0			?	62		10		hard	2	now thin, was strong	no record	Was sloughing when a partly plastic operation was made.
Feb. 18, 1873	263	single		right	1		at	50.5	52	0	2.10		soft	5	delicate	blow 3 years ago, affliction	Hard, growing rapidly. Breast became infiltrated.
Mar. 1, 1873	264	married	0	both	1		after	55.2	56	0	1	2 mos.	soft	1, 3	full	no record	Has had a small tumor, benign some 12 years, in right breast. Remained quiescent till June, 1872. The gland was then destroyed by cleetrolysis. The disease has returned in both breasts. Left breast completely infiltrated.

Mar. 4, 1873	265	married	0	right	1		after	55.7	56	0	11 mo.		soft	3	fat	no record	Whole breast infiltrated. Dysmenorrhœa in early life, nipple not retracted. March 25, 1873. Rapidly increasing. Died in September.
Mar. 4, 1873	266	widow	2	right	1		before	38	39	0	1.8		soft	3	full	affliction	No retraction of nipple, severe lancinating pains.
Mar. 15, 1873	267	single		both	1	phthisis	before	37	38	0	2.3		hard	1, 9	full, good health	no record	Breast very painful at menstrual period. Has had dysmenorrhœa. A lump was observed in left breast 12 years ago; remained quiet till 1 year ago, when it began to grow and also to develop in the right breast.
Apr. 1, 1873	268	married	6	left	0		at	49.6	51	0	?		hard	5	fat	blow 1½ years affliction	Mother died at 36, from hæmorrhage after extraction of tooth. No further record.
Apr. 8, 1873	269	married	0	left				?	60				hard	5		no record	
Apr. 24, 1873	270	single		both	1		before	?	28	1	13 =	13 =	hard	2	full	no record	Left breast amputated in February, 1860. The disease reappeared in right breast in September of same year, axillary glands becoming involved at the same time. In November of the same year disease returned in cicatrix. It was at first proposed by one of the surgeons to amputate, but the operation was deferred, and after a few months the tumors in both breasts began to recede and became atrophied. Is now well, April 24, 1873. No further record.
May 13, 1873	271	married	1	left	0		after	64	65	1	?	?	hard	5	full, good health		Pain lancinating and severe; tumor size of hen's egg.
May 22, 1873	272	widow	3	left	1		at	48.10	50	0			mixed	5	full, good health	abscess	Began as knots in skin 14 months ago. Breast is shrunken and tightly bound to muscles, almost immovable. Aug. 9, 1873, worse. It is probable that the disease commenced some time before the date assigned.
May 22, 1873	273	married	6	left	0	father died of cancer of stomach	before	46	48	0	?		hard	5, 8		blow 4 months before tumor	Had caustic applications one year ago. No further record.

* Caustic.

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June 3, 1873	274	widow	4	right	0		after	74	76	0	4.5		hard	5, 7	well developed, good health	abscess	Nipple retracted, April 22, 1874. Is in good health, but tumor increasing. Died Nov. 11, 1875.
June 28, 1873	275	widow	2	left	1	father and brother consumptive	at	48	49	*	?		hard	5, 9	fat, large, good health	never nursed; caustic	Nipple destroyed by caustic plaster. Had both her children since 40 years old. Grown rapidly during last 6 months. No further record.
July 8, 1873	276	married.	4	right	0		at	48	51	1	9 =	6 =	hard	2		affliction	Recovered from operation. Patient has continued well up to present time, March, 1879.
Aug. 21, 1873	277	widow	several	both	1	phthisis	after	57.2	59	0	2		mixed	5, 9	fat	affliction, caustic	Was first treated with caustic plasters in Europe. Then had "mud treatment" in Rome. Sept. 3, 1873, disease now in left breast, and skin, and axilla. Died Oct., 1873, of internal cancer.
Dec. 20, 1873	278	married	0	left	1		before	44.11	45	0	?		soft	5	fat	no record	Menses scanty but regular. Tumors smooth, growing rapidly. Died June 9, 1874, of typhoid fever.
Dec. 31, 1873	279	married	6	right	1	phthisis	at	47	49	1	3	1	hard	5, 9	now thin	no record	Tumor very hard, nipple retracted, arm swollen. Ulcer phagedenic, has diabetes. Died in 1 year after operation.
Feb. 4, 1874	280	widow	1	left	0	sister, cancer of uterus	after	65.11	67	0	?		hard	5	full	no record	Sister died of cancer of uterus. Has insomnia. Tumor at lower margin of breast, globular and painful. March 3d, about the same. No further record.
Feb. 12, 1874	281	married	several	left	0		at	52	56	1	5	1	hard	5	thin		

Mar. 17, 1874	282	widow	2	right	0	mother and aunt, cancer	at	44	45	*			hard	2, 8		caustic 10 years ago.	This patient came to me when 55 years of age, when the disease had returned in the cicatrix. Of course it is impossible to say whether the tumor, when burnt, was malignant or not. Lymphatic system is now involved, and no operation advised.
Mar. 18, 1874	283	married	2	left	1	two aunts, cancer of breast; brother, cancer of stomach	after	54.6	56	1	2.3	9 mos.	hard	5, 8	fat	no record	Sept. 23, 1874, disease returned in cicatrix, and lymphatics, and internal organs, and died at Christmas.
Apr. 13, 1874	284	widow	0	right	1		after	65.3	66	0	?		hard	5	well till 1 year ago	blow 1 year ago, tumor 3 months after	No further record.
Apr. 13, 1874	285	widow	5	right	0		after	55.9	56	0	?		hard	5	fat	affliction	Whole gland infiltrated, nipple retracted. Has epileptic daughter. No further record.
Apr. 13, 1874	286	married	2	left	0		after	61.6	63	0	?		hard	5	very fat, good health	blow 2 years ago	Patient weighs 250 lbs. Tumor very painful, nipple retracted. Superficial ulceration around nipple. No further record.
May 1, 1874	287	single		right	1		before	42	45	0	4		hard	5		blow 4 years	Still menstruates. Had dysmenorrhœa when young.
June 3, 1874	288	widow	1	right	1	phthisis	after	?	62	0			hard	1, 9	full	affliction, did not nurse	Benign tumor 9 years ago. Began to develop 5 years ago, but grew slowly. Is now growing rapidly. No further record.
June 3, 1874	289	married	4	left	1, 4 w.		before	45.10	46		?	?	?	3	full, good health	no record	Consultation. Advised removal.
June 4, 1874	290	married	0	right	0		before	?	44				?	1			
June 16, 1874	291	married	3	left	0		before	37	38	1	6 =	4 = living	hard	5	well developed	blow	Amputation Mar. 4, 1875. Cicatrix healthy. Is well, March, 1879.
Sept. 29, 1874	292	widow	0	left	0		before	44.5	45	2	1.10		mixed	5	very fat	injury from stays	Tumor discovered February, 1874. Caustic plaster applied in France, Mar. 15, 1874. Disease returned. Amputation Sept. 29, 1874. Disease returned in axilla and cicatrix. 2d operation March, 1875. Died December, 1875.

* Caustic.

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Oct. 19, 1874	293	single		right	1		before	44.6	45				?	3		no record	Development very rapid; whole gland infiltrated and immovable; axillary glands and skin involved.
Oct. 20. 1874	294	married	9	left	1		before	35.8	36	0	7 mos.		soft	3, 6	fat	no record	Development very rapid. Now 5 months pregnant. Died Jan. 20, 1875.
Nov. 10, 1874	295	married	0	left	0		before	45	46.4	1	2	8 mos.	scirrhocystic	4	fat, strong	no record	Menses regular. Amputation Mar. 4, 1875. Disease returned and developed rapidly. Jan. 30, 1876, large growth under pectoral muscle, and return in cicatrix with ulcer.
Nov. 30, 1874	296	single		right	1		before	43.10	44	0			hard	5	well-developed	no record	Dysmenorrhœa when young. Tumor size of walnut, hard, rather smooth.
Dec. 3, 1874	297	single		left	1		before	40	42	0	3.6	1.6	hard	5		no record	
Dec. 7, 1874	298	married	1	right	1		at	50	53	0	?		hard	5	fat, good health	blow	Tumor and gland now contracting, was large, arm greatly swollen, cannot live long. No further record.
Dec. 19, 1874	299	married	several	right	0		before	?	44	?	?		hard	5	good health	no record	Consultation; advised operation. No further record.
Jan. 14, 1875	300	married	4	right	1		before	45.3	46	0	?		soft	5	now delicate, was in good health	abscess, 5 years ago	Did not nurse from right breast with last child; whole gland now infiltrated. Father 86 years old. Consultation. No further record.
Jan. 27, 1875	301	married	2	right	0		after	58	60	0	?		hard	5		abscess several years ago	Tumor ulcerated; nipple destroyed. No further record.
Apr. 10, 1875	302	widow	0	right	1	father, cancer of stomach: sister, phthisis	after	65.9	66	0			?	3, 8	fat	no record	Developing rapidly.

Apr. 20, 1874	303	widow	2	both	0		after	50	54	0	4.6		hard	5		injury, affliction	Skin of breast much involved, "cuirass." Change of life at about 40. Disease progressed rapidly, axillary glands and right breast soon involved, and patient died in 6 months, of general cancer.
Apr. 23, 1875	304	widow	2	right	0	father, phthisical	at	49	49.6	1	1.7	1.6	hard	5, 9	fat	blow 1 year ago	Axillary glands became involved in December, 1875. Nipple not retracted. Died August, 1876.
June 29, 1875	305	single		right	0	phthisis	at	43	44	1	3	2	hard	1, 9		affliction	Has had a benign tumor 6 years. Developed rapidly 1 year before operation.
July 20, 1875	306	widow	2	right	0	sister, cancer	after	54	55	?	?		hard	5		never nursed well from right breast	Menses ceased 12 years ago. Nipple now retracted, considerable pain. Sister died of cancer. Much mental care. No further record.
Sept. 9, 1875	307	married	2	right	1	brother, cancer	after	?	61	0	?		hard	5	well developed	no record	Brother was said to have epithelioma of lip. No further record.
Sept. 15, 1875	308	single		left	1 and skin		before	27.7	28	0	1.5		soft	3, 6	fat, good health	no record	Whole breast infiltrated. Feb. 16, 1876, tubercles in skin, and extending under arm and on chest, painful and tender. Died Sept. 6, 1876, of cancer of lungs and other organs.
Sept. 21, 1875	309	widow	6	right	1		before	35.6	37				?	5	good health	no record	Consultation. Advised operation. No further record.
Oct. 25, 1875	310	widow	3	left	0		at	49	50	1	2	1	soft	5	good health, rather thin	abscess, affliction	Consultation. Recovered from operation, but disease returned, and patient died in one year.
Nov. 3, 1875	311	married	1	left	1	cancer, consumption	before	?	36	?			hard	1, 6 8, 9	fat	no record	Menses irregular. Benign tumor 6 years. Consultation; advised amputation. Mother's side very consumptive. No further record.
Jan. 3, 1876	312	married	6	left	0	mother, cancer	after	56.5	58				hard	5, 8	fat	injury from stays	A sister died of "Bright's disease." Nipple now much retracted.
Feb. 1, 1876	313	widow	0	right	0		before	35.3	36	0	?		?	5	full	affliction	Has menorrhagia. No further record.

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Mar. 4, 1876	314	married	4	right	0		at	53	56	1	3+	1+	mixed	5		affliction	Discovered 3 years ago. Amputation 10 months ago. Has a numb sensation in feet, as if standing on cushions. Has returned in cicatrix, and the skin is studded with tubercles. Died in a little more than a year after operation.
Apr. 17, 1876	315	married	0	left	1		at	51	52	0	?		?	5		affliction	Nipple retracted. Tumor size of robin's egg, hard, pain. No further record.
Apr. 27, 1876	316	married	3	right	1		before	42.9	43		?		?	5	good health		Arsenical plaster applied, and died of arsenical poison in two months after application.
Apr. 29, 1876	317	widow	3	left	1		at	44.9	46	1	?		hard	5	nervous	affliction	Menstruates irregularly. Whole gland infiltrated. No further record.
May 12, 1876	318	married	11	left	0	mother consumptive	before	42.4	43				?	5, 9	fat	no record	Discovered tumor 8 months ago, 6 months after weaning child. Nipple now retracted. Advised operation. No further record.
June 10, 1876	319	married	several	right	0	sister, phthisis	at	44	45	0	?		hard	5	delicate, was strong	no record	No further record.
Aug. 10, 1876	320	single		right	0	two sisters, cancer	at	49	50	1	3.6 =	2.6 =	hard	5	thin, good health	no record	One sister died of cancer of tongue, one of cancer of uterus. Father lived to 70; mother to 80. Was alive and well 2½ years after the operation.
Oct. 3, 1876	321	married	5	left	0		at	52	53	0	?		hard	5	full, good health	no record	Mother living at 90 years. No further record.
Oct. 16, 1876	322	married	2	right	1		after	51.3	52		?		hard	5	full, good health	blow 1 year ago	Whole breast infiltrated; nipple retracted. Change of life 10 years ago. No further record.

Oct. 16, 1876	323	married	2	left	0	cancer	before	39	41		?		hard	5, 8	good health	injury from stays	Lancinating pain. Consultation.
Nov. 1, 1876	324	married	9	right	1	mother consumptive	at	52.3	53				?	5, 9	good health	injury from stays	
Dec. 1, 1876	325	married	2	right	1	cancer and phthisis	before	40	41	*	2		mixed	5, 8, 9,		caustic	Consultation. Died of general cancer.
Jan. 10, 1877	326	widow	0	left	1		after	63	65	0	?		hard	5	delicate, was strong	affliction	Painful. No further record.
Jan. 17, 1877	327	married	2	left	1	cancer and consumption	at	46	47	1			hard	1, 8, 9	good health	affliction, nursed badly in left breast	Dysmenorrhœa before marriage. Mother and brother died of cancer; and a sister, of what was called "scirrhus of the womb." Mother's family all consumptive. Nipple now retracted. Benign tumor for 2 years, amputated Feb. 22, 1877. 2d operation Jan. 17, 1878. Jan. 21, 1877, wound healed. March 6th, gaining strength. Has had two attacks of erysipelas.
Jan. 19, 1877	328	single		right	1	consumption	at	45.9	46	0	?		hard	5, 9		affliction	Insomnia. Consultation. No further record.
Feb. 28, 1877	329	single		left	1		before	30.10	31	0	1		soft	3, 6	strong, good health	blow, immediately followed by tumor	Growing rapidly, extended internal organs, and died of general cancer.
Apr. 29, 1877	330	widow	several	both	0		at	33.9	55	0	3.4		mixed	1	very fat, light	abscess with first child, injury by stays	Has had a lump in the breast since she had mammary abscess 24 years ago. September, 1876, gland contracting. Dec. 9, 1878, breasts both contracting into small hard masses. Pulse 120, very feeble, axillary glands and lymphatic system now involved.
June 13, 1877	331	widow	1	right	0		after	65.5	66	1	1.6	11 mo.	soft	5	thin, good health	no record	Oct. 2, 1877, general health remains good, but tumor grows, and is painful. Mar. 4, 1878, pretty well. Disease soon returned, and patient died in 11 months after operation.
Sept. 26, 1877	332	married	3	right	0	phthisis	before	?	40				?	9		abscess	Retraction of nipple, which was always imperfect. Consultation. No further record.

* Caustic.

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Oct. 5, 1877	333	widow	6	right	o		after	58	60	o	?		hard	5	fat	inflammation of breast 3 years ago	No further record.
Nov. 29, 1877	334	married	6	left	1		after	58	60	o	2.7		soft	5	fat	no record	
Dec. 4, 1877	335	widow	several	right	o		after	76	77	1	?		hard	5			Amputation September, 1876. Healed and remained well till 6 weeks ago; when, having pain in side, she was given 18 drops of Magendie's solution morphine, from which she died.
Dec. 4, 1877	336	widow	7, y. 17	left	1		after	59.6	60	o	?		?		fat, good health	no record	Has had dysmenorrhœa. No further record.
Dec. 19, 1877	337	widow	1	left	o	consumption, sister, cancer	at	52.7	53	o	?		hard	5, 9	delicate	no record	Sister died of cancer of uterus. No further record.
Jan. 3, 1878	338	single		right	o		after	55.7	56	1			hard	5	thin	affliction	Amputation, Mar. 5, 1878.
Jan. 15, 1878	339	married	several	left	1		at	46	47				?	5			Father 86 years old. Consultation. No further record.
Jan. 15, 1878	340	widow	6	right	1		after	69.6	70	o	1 —		soft	3, 7	now feeble, was strong	abscess with first child, blow	Fell and broke her arm, and struck her breast at point of abscess, 6 months ago. Died of cancer in a little less than 1 year.
Feb. 11, 1878	341	single		left	o	father, cancer of stomach	after	?	68				hard	5, 8		blow 3 years ago	Pain at time of blow. After occasional twinges, about 4 months later, there appeared four little nodules in breast, which gave lancinating pains. They increased, and a cancerous growth resulted. Amputation, March, 1877; second operation following in November; third operation, Feb. 13, 1878.

Feb. 27, 1878	342	married	2	right	0	grandfather, cancer of lip	before	?	33				hard	5, 6, 8	dyspepsia	affliction	
Mar. 4, 1878	343	widow	0	right	0	phthisis	after	63.5	64	0			hard	5, 9	delicate, was strong		
Mar. 11, 1878	344	married	8	left	0		before	46.8	47	1	?		soft	3	full, good health	blow 9 months ago	Had malarial fever last summer. Consultation; advised removal. No further record.
Apr. 6, 1878	345	married	9	right	0		before	43	44	0			hard	1	fat, vital	blow 4 years ago	Benign at first; has had rheumatism. Developed rapidly during last year. Is living, March, 1879, in good general health.
Apr. 8, 1878	346	widow	2	left	0		before	46.6	49	0			scirrhocystic	4	fat, good health	abscess 15 years ago	Abscess resulted from blow, when youngest child was 1 year old. Cystic: nipple not retracted. Feb. 1, 1879, much the same.
Apr. 15, 1878	347	married	4	left	1	consumption	before	37.6	38	0	1	6 mos.	soft	3, 9	fat	blow, affliction	Tumor size of English walnut, softened in centre. Nipple not retracted.
Apr. 15, 1878	348	widow	0	right	0		at	53	55	0	2.8		hard	5	fat, nervous	no record	Parents very old. October, 1878, feeble: secondary disease in lungs.
May 5, 1878	349	widow	2	left	0	cancer and consumption	before	35.6	36				soft	3, 8, 9	well developed, good health	affliction	Itching in left breast some months ago; soon after discovered a lump. Dyspepsia, lives luxuriously. Advised removal.
May 5, 1878	350	married	several	both	1		before	?	50	0			?	5		no record	Has had dysmenorrhœa, metritis twice, and pelvic cellulitis: miscarriage. Left breast now painful and hard. Axillary glands on right side enlarged. Feb. 13, 1879, patient's general health pretty good.
June 15, 1878	351	widow	4	left	0		after	51.6	52	0			?	5	very fat	no record	Menstruates regularly. Eats a good deal of meat.
July 31, 1878	352	married	2	right	0		before	?	32				?	5	strong, good health	nurses badly from right breast	Nipple retracted and tender; gland much enlarged. Left breast also tender.
July 31, 1878	353	married	1	right	0		before	44	45				?	5	very fat,	no record	Menstruates regularly. Eats a good deal of meat, tumor hard, nipple retracted.

Date.	Number.	Civil Condition.	No. of Children.	Breast involved.	Axilla involved.	Family History.	Manifestation of Disease before or after Menopause.	Age at Commencement.	Age at Operation or Observation.	No. of Operations.	Duration of Disease.	Lived after Operation.	Variety of Cancer.	Group.	Physical Condition.	Assigned Exciting Cause.	General Remarks.
July 31, 1878	354	married	9	left	1		before	41.2	42	0	?		?	1	fat	abscess, 17 years ago	Now pregnant. Last child nursed only 3 months. Nipple very large and hard, sharp lancinating pain. Has had three miscarriages.
Aug. 15, 1878	355	widow	0	right	1		after	61.6	63	0			?	5	fat	affliction	Youngest of ten children. Was 40 when married. Axilla involved and lymphatic glands above clavicle.
Oct. 12, 1878	356	married	4	right	0	cancer and phthisis	before	45.6	47	1			hard	1, 8, 9		abscess with first child 20 years ago, affliction	Has had 5 miscarriages. Never nursed well. Benign tumor several years. Consultation.
Oct. 19, 1878	357	widow	9	left	0	consumption	after	53	54	0			soft		fat	blow 1 year ago	Breast continued to discharge bloody fluid after having last child.
Nov. 4, 1878	358	married	0	left		consumption	before	?	40	0			soft	1, 9	fat	blow 13 years ago, and 1 year ago	Benign tumor followed blow. Has had dysmenorrhœa. Tumor growing fast. No retraction of nipple. Eats much meat.
Nov. 4, 1878	359	widow	0	?			before	39.6	40	0			soft	3	fat	blow 5½ years ago, affliction	Very painful. No retraction of nipple.
Nov. 15, 1878	360	married	1	left	0		at	45.2	46	0			hard	5	thin	inflammation of breast while nursing	Has dyspepsia, nipple retracted. Did not have abscess, but tumor formed at seat of pain.
Dec. 5, 1878	361	married	0	right	0		at	45	46	0			soft		fat, good health	affliction	First noticed tumor December, 1877, above nipple; now involves upper half of breast.
Dec. 17, 1878	362	married	7	right	0		before	39.2	40	0			?		full, good health	nursed badly from right breast	Did not nurse last child at all. Parents very old.

Dec. 24, 1878	363	widow	3	left	0	mother, cancer of uterus	after	57.9	58	1			?	5, 8	full, good health	blow September, 1877	Discovered tumor September, 1878; was small and hard, with pain in arm of same side. Tumor now growing rapidly. Skin involved.
Jan. 3, 1879	364	single		left	0		before	?	50				?			affliction	
Jan. 4, 1879	365	married	several	right			after	57	58	1	1 +	10 d.	scirrhous cystic	1, 4, 6	fat, sanguine	affliction	After weaning last child, 24 years ago, a discharge continued from the right nipple till now. No retraction of nipple till about one year ago, when the discharge stopped. The amputation was followed by much sloughing, and the patient died in ten days.
Jan. 11, 1879	366	single		right	1		at	51	60	0	9		hard	2	good health	no record	Ulcerated 3 years ago, ganglia above clavicle now enlarged. Probable duration of malignant growth, 9 years.
Jan. 18, 1879	367	married	several	left	0		at	48	50	1	?		scirrhous cystic	4		blow	No further record.
Mar. 1, 1879	368	married	0	right	0	father, phthisis	after	51	52				hard	5, 9	fat, good health	blow 1 year ago	Discovered tumor July, 1878. Tumor hard and smaller, less tender and painful. Advised to leave alone. No further record.
March, 1879	369	married	2	left	0	brother and sister, phthisis	before	37	40	1			hard	5	good health	no record	No dysmenorrhœa. Menstruates regularly now. Operation in 1876. May 7, 1880, disease returned, and later lungs involved. Subjected to great mental disquietude one year before.
Jan. 14, 1879	370	widow	3	?	1	mother, cancer of parotid	?	?	52	1			hard	5, 8	fat	no record	Tumor removed 3 months ago. Disease returned in axilla at date.
Mar. 18, 1879	371	widow	2	right	1	phthisis	before	39	39		21 m.		hard	5, 9	moderate health	blow	Dysmenorrhœa, nursed badly, nipple not retracted. Discovered disease July, 1878. Advised to leave alone and diet. Died Mar. 30, 1880.
Mar. 29, 1879	372	single	0	left	0		before	27	29		40 m.			5, 6	well developed, good health	no record	Discovered disease October, 1877. Began in nipple. Discharge noticed 18 months ago. Nipple retracted and indurated; no uterine. Advised removal and diet. Nov. 29, 1879, axilla involved. Operation in axilla soon after. Died Jan. 13, 1881.

Date.	Number.	Civil Condition.	No. of Children.	Breast involved.	Axilla involved.	Family History.	Manifestation of Disease before or after Menopause.	Age at Commencement.	Age at Operation or Observation.	No. of Operations.	Duration of Disease.	Lived after Operation.	Variety of Cancer.	Group.	Physical Condition.	Assigned Exciting Cause.	General Remarks.
March, 1879	373	married	2	left	0	phthisis	before	37	40				hard	5, 9	fleshy	blow and affliction	Costive habitually. Dysmenorrhœa and uterine and anxiety, 3 years before.
Apr. 15, 1879	374	married	1	right	1	mother, cancer of uterus at 60 years	before	49	50					5, 8		blow	Disease discovered June, 1878. Menstruates now, lancinating pain, anxiety, meat-eater, nipple not retracted.
May 5, 1879	375	widow	3	right	1	sister and son phthisis	before	52	53		13 m.		soft	3	fat, spare when young	affliction	Disease discovered June 18, 1878, soon after husband's death. Still menstruates. Died July 17, 1879.
May 6, 1879	376	single	0	left			before	21	37	2			hard	1	good health	blow 16 years before, lump since	Malignancy began three years ago. Operation May 20, 1879. Jan. 6, 1880, well except where ligature had been left; hard nodule there removed in Jan. 1880. April 15, 1880, married; May 6, 1880, disease returned.
June 18, 1879	377	widow	0	?	0		after		65				hard	5	fat	blow years ago, anxiety	Nipple retracted, tender.
July 2, 1879	378	married	0	right	0	aunt, cancer of uterus; another, phthisis	?		53				hard	5, 8, 9		mental trials of late	No uterine. Two miscarriages, result of accidents. No further record.
Nov. 1, 1879	379	single	0	?	0	brother and sister, phthisis	before		42				hard	1		no record	No uterine; nipple retracted. Feb. 27, 1880, disease has not increased.
Nov. 28, 1879	380	single	0	right	0	aunts, phthisis	?	51	53				hard	5, 9		no record	Two years ago noticed lump. Advised to leave alone.
Nov. 28, 1879	381	widow	1	?	0	phthisis and cancer	before		44				soft	3, 8, 9	good flesh	no record	Jan. 7, 1880, pain and tumor increasing.

Jan. 31, 1880	382	single	0	left	0	uncle, phthisis	at	46	47	1	21 m.		soft	3, 9		fall 3 years ago, anxiety	Discovered disease in November, 1878. Feb. 18, 1880, operated upon. Died six months and one day after operation, from hæmorrhage from bowels, due to malarial disease; lungs also involved.
Feb. 12, 1880	383	married	0	left	0	mother, cancer	before	39	41	1				3, 8		blow	Aug., 1877, discovered tumor, blow 5 years before. Operation, Aug. 21, 1877. Disease returned in 3 mos. in right ovary, and then in left one.
Jan. 23, 1880	384	widow	2	left	1		before	44	48	1			hard	5	well developed	blow 4 years ago, followed by tumor	Menstruates regularly. No uterine. Tumor removed 2 years ago; one year later axilla involved. No operation advised. Died in summer.
Feb. 13, 1880	385	widow	6	right	?		?		56	1			hard	5		blow, May, 1879, affliction	Operation February, 1880.
Mar. 24, 1880	386	widow	several	right	?		after		73				hard	5, 7	fleshy	blow, 3½ years ago	No further record.
Apr. 1, 1880	387	single	0	left	0	father, phthisis	after	51	54				hard	5, 9		no record	Tumor discovered three years ago.
Apr. 8, 1880	388	widow	0	?	0	father, phthisis	after	65	69				hard	5, 9	spare	anxiety	Nipple retracted. Two years ago began to grow rapidly. Disease discovered four or five years ago.
May 10, 1880	389	single	0	left	0	cancer and phthisis	before	44	45				hard	5, 8, 9		no record	Disease discovered one year ago. Nipple not retracted. No uterine.
July 21, 1880	390	single	0	right	0	cancer	?	46	56	2			hard	1, 8		no record	Operation six years ago; second do. in 1877. Nodules in skin now. Disease discovered ten years ago.
May, 1880	391	married	3	left	?		after	44	50	1			hard	1		no record	Disease discovered six years ago. Operation, May, 1879.
Sept. 30, 1880	392	married	5	left	0		?		46				hard	5		no record	Had broken breasts while nursing. No retraction of nipple. Nov. 10, 1880, one axillary gland involved. Jan. 27, 1881, general condition good.
Oct. 28, 1880	393	married	1	right	?		right		55				hard	2		blow 8 months ago	No further record.
Oct. 20, 1880	394	widow	several	right	?	phthisis	after		65				hard	5, 9	fat	no record	Habitually costive.

Date.	Number.	Civil Condition.	No. of Children.	Breast involved.	Axilla involved.	Family History.	Manifestation of Disease before or after Menopause.	Age at Commencement.	Age at Operation or Observation.	No. of Operations.	Duration of Disease.	Lived after Operation.	Variety of Cancer.	Group.	Physical Condition.	Assigned Exciting Cause.	General Remarks.
1880	395	married	?	right	1		before	42	44				hard	5	good flesh	no record	Never pregnant. Constipation and hæmorrhoids, dysmenorrhœa and uterine, enlarged glands above clavicle, nodules in skin over breast, liver enlarged, tender; constant emesis. Lump discovered two years ago.
Jan. 12, 1881	396	married	1	right	0	cancer and phthisis	before	40	40				soft	3, 8, 9	fat, formerly thin	pressure from stays	Breast enlarged five weeks ago.
Mar. 2, 1881	397	single	0	?	1	phthisis	?	41	44				hard	2, 9	well developed	blow 3 years ago, affliction at time of injury	Lump discovered almost immediately after blow. Grew continually, and in December, 1880, ulcerated. Advised amputation.

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